

# SERVICE MANUAL



## EP721/727/723/728 Family / EW1610 Family

EP721 Family	EP721, DS309, PRO100S, EP721i, DS309i, EO620, TS721, OP1122 DX609V, N EP706, S22E
EP727 Family	EP727, EP727i, DX609, PR0200X, DX609i, OP1230, DX609V
EP723 Family	TS723, OP1126
EP728 Family	EP728, TX728, OP1260, EP728I
EW1610 Family	EW1610, EW628

Date	Revise Version	Description
2007.08.27	V1.0	Initial Issue
2007.09.14	V2.0	Add EP723&EP728
2007.11.16	V3.0	Add Appendix ; Modify chapter1 & chapter5
2007.12.20	V4.0	Add EP723/728 Exploded Drawing & RSPL
2008.06.04	V5.0	Add EW628/EW1610
2009.02.06	V6.0	Add EP721/727/723/728 / EW1610 extended models (Add in "Forgetting Password" in chapter 3. Modify "Serial Number System Definition" in Appendix B.)

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TSE: *Yoyo*

Check: *Aluk*

Approved: *C.C. Chen*

## EP721 / EP727 / EP728 / EP723 / EW1610 Comparison List

PARTS	EP721	EP727	EP728	EP723	EW1610
DMD	48.87K01G001	48.87M01G001		48.87K01G001	48.8BR01G001
TOP COVER	51.88N06G001		51.88N06G021		51.88N06G0C1
DMD THERMAL PAD	52.87J01G001				52.83N15G001
COLOR WHEEL MODULE	70.88N19GR01		70.89M17GR01		70.8AH14GR01
ENGINE MODULE	70.88N20GR01		70.89M18GR01		70.8BR08GR01
ROD MODULE	70.88N21GR01				70.8AH13GR01
LAMP DRIVER	75.88N01G002		70.89M19GR01		70.8BR11GR01
BOTTOM COVER MODULE	75.88N07G001		75.89M07G001		
DMD BOARD	80.88N02G001				80.89F02G001
MAIN BOARD MODULE	80.88N01G002	80.88S01G002	80.89N01G002	80.89M01G002	70.8BR09GR01
LAMP MODULE	SP.88N01GC01		SP.89M01GC01		
EDID	39.88N03G001	39.88S03G001	39.89N03G001	39.89M04G001	39.8BR03G001

## EP721 Family Comparison List

PARTS	EP721 / DS309 / PRO100S / EP721i / DS309i / EO620 / TS721 / OP1122	DX609V	N EP706	S22E
TOP COVER	51.88N06G001		51.88N06G041	51.88N06G071
PCBA MAIN BOARD	80.88N01G003	80.8CM01G001	70.88N25GR01	70.89U12GR01
EDID	39.88N03G001	39.8CM02G001	39.88N05G001	39.88N07G001
POWER CORD	42.50115G001		42.50112G001	
DMD	48.87K01G001	48.89B01G001	48.87K01G001	

## EP727 Family Comparison List

PARTS	EP727 / EP727i / DX609 / PR0200X / DX609i / OP1230	DX609V
INTERRUPT SWITCH	75.88N02G001	75.88T05G001
DMD	48.87M01G001	48.89B01G001
MAIN BD	80.88S01G003	80.8CM01G001
EDID	39.88S03G001	39.8CM02G001

## EP728 Family Comparison List

PARTS	EP728 / TX728 / OP1260	EP728I
COLOR WHEEL MODULE	70.89M17GR01	70.89N16GR01
MAIN BOARD MODULE	80.89N01G003	80.89N01G012
LAMP DRIVER	70.89M19GR01	70.89N17GR01

## EW1610 Family Comparison List

Parts	EW1610	EW628
MAIN BOARD MODULE	70.8BR09GR01	70.8BR10GR01

*Note: The EP723 Family have no difference.*

## Preface

This manual is applied to EP721/727/723/728 Family / EW1610 Family projection system. The manual gives you a brief description of basic technical information to help in service and maintain the product.

Your customers will appreciate the quick response time when you immediately identify problems that occur with our products. We expect your customers will appreciate the service that you offer them.

This manual is for technicians and people who have an electronic background. Please send the product back to the distributor for repairing and do not attempt to do anything that is complex or is not mentioned in the troubleshooting.

*Note:*

*The information found in this manual is subject to change without prior notice. Any subsequent changes made to the data herein will be incorporated in future edition.*

EP721/727/723/728 Family / EW1610 Family Service Manual

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Manual Version 6.0



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**Appendix A**

Exploded Image	I
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**Appendix B**

Serial Number System Definition	XXX
PCBA Code Definition	XXXV

# Introduction

## 1-1 Highlight

No	Item	Description
1	Technology	<ul style="list-style-type: none"><li>• Single 0.55" SVGA Type-X DMD chip (EP721/723 Family)</li><li>• Single 0.55" XGA Type-X DMD chip (EP727/728 Family)</li><li>• Single 0.65" WXGA-800 Type-A DMD chip (EW1610 Family)</li></ul>
2	Dimension (W x D x H)	<ul style="list-style-type: none"><li>• 259 x 188 x 73 mm (foot height not included)</li></ul>
3	Weight	<ul style="list-style-type: none"><li>• &lt;4.5lbs. for mechanical feature requirement</li></ul>
4	Tilt Angle	<ul style="list-style-type: none"><li>• 6 degrees with elevator mechanism</li><li>• Minimum: one push button and one adjust knobs for height adjustment - -2mm to +8mm</li></ul>
5	Power Supply	<ul style="list-style-type: none"><li>• 100V ~ 240V +/- 10% 50/60Hz</li></ul>
6	Power consumption	<ul style="list-style-type: none"><li>• 260W (Maximum) Standby Mode - &lt; 10 Watt 110V AC (EP721/723/727/728 Family)</li><li>• 280 W (Maximum) Standby: 10 W Max (EW1610 Family)</li></ul>
7	Resolution	<ul style="list-style-type: none"><li>• 800x600 (EP721/723 Family)</li><li>• 1024x768 (EP727/728 Family)</li><li>• 1280x800 (EW1610 Family)</li></ul>
8	Brightness	<ul style="list-style-type: none"><li>• Typical: 1750 lumens (EP721/727 Family)</li><li>• Typical: 2150 lumens (EP723/728/EW1610 Family)</li><li>• Minimum: 1500 lumens (EP721/727 Family)</li><li>• Minimum: 1935 lumens (EP723/728 Family)</li><li>• Minimum: 1750 lumens (EW1610 Family)</li></ul>
9	Contrast	<ul style="list-style-type: none"><li>• Typical: 1800:1 (EP721/723/727/728 Family)</li><li>• Typical: 600:1 (EW1610 Family)</li><li>• Minimum: 1100:1 full on/full off (EP721/727 Family)</li><li>• Minimum: 1400:1 full on/full off (EP723/728 Family)</li><li>• Minimum: 450:1 full on/full off (EW1610 Family)</li></ul>
10	Uniformity	<ul style="list-style-type: none"><li>• Typical : 80%</li><li>• Minimum: 65%</li></ul>
11	Throw ratio	<ul style="list-style-type: none"><li>• 1.95~2.15: 1 distance/width (EP721/723/727/728 Family)</li><li>• 1.55~1.7:1 distance/width (EW1610 Family)</li></ul>
12	Projection lens	<ul style="list-style-type: none"><li>• YM31, 1.10X Manual zoom/focus</li></ul>

No	Item	Description
13	Lamp life	<ul style="list-style-type: none"> <li>• 3000/2000 (ECO/STD) (EP721/727 Family)</li> <li>• 4000/3000 (ECO/STD) (EP723/728 Family / EW1610 Family)</li> </ul>
14	Offset	<ul style="list-style-type: none"> <li>• 115% (EP721/723/727/728 Family)</li> <li>• 112% +/-5% (EW1610 Family)</li> </ul>
15	Video compatibility	<ul style="list-style-type: none"> <li>• NTSC: M (3.58MHz), 4.43 MHz, 480i/p @60Hz</li> <li>• PAL: B, D, G, H, I, M, N, 576i/p @50Hz</li> <li>• SECAM: B, D, G, K, K1, L</li> <li>• HDTV: 480p, 576p, 720p, 1080i (50/60 Hz)</li> </ul>
16	Aspect ratio	<ul style="list-style-type: none"> <li>• 4:3 with support for 5:4 and 16:9: 1.78:1 (anamorphic DVD &amp; HDTV) (EP721/723/727/728 Family)</li> <li>• 4:3 16:9-I 16:9-II Window (EW1610)</li> </ul>
17	Color wheel	<ul style="list-style-type: none"> <li>• 5 Segments R80Y30G84W90B76, 2x (EP721/727 Family /EW1610 Family)</li> <li>• 6 Segments R90Y28G90C28W42B82, 2x (EP723/728 Family)</li> </ul>
18	Lamp	<ul style="list-style-type: none"> <li>• 180W Phoenix Lamp (EP721/727 Family)</li> <li>• 200W Osram Lamp (EP723/728 Family / EW1610 Family)</li> </ul>
19	Temperature	<ul style="list-style-type: none"> <li>• Operating: 5 - 40°C (ECO mode) 5 - 35°C (Full power mode)</li> <li>• Storage: -20~ 60°C</li> </ul>
20	Form Factor	<ul style="list-style-type: none"> <li>• New X15 type – A39 design language</li> </ul>
21	IR receivers	<ul style="list-style-type: none"> <li>• Two IR receivers (Front &amp; Top)</li> </ul>
22	Keystone correction	<ul style="list-style-type: none"> <li>• +/- 40 vertical keystone</li> </ul>
23	Digital zoom	<ul style="list-style-type: none"> <li>• 100 to 200% with pan-ability</li> </ul>

## 1-2 Compatible Mode

### Analog

Compatibility	Resolution	V-Sync [Hz]
VGA	640x480	60
	640x480	72
	640x480	75
	640x480	85
	720x400	70
	720x400	85

Compatibility	Resolution	V-Sync [Hz]
SVGA	800x600	56
	800x600	60
	800x600	72
	800x600	75
	800x600	85
	832x624	72
XGA	1024x768	60
	1024x768	70
	1024x768	75
	1024x768	85
	1152x864	60
	1152x864	70
	1152x864	75
	1152x864	85
WXGA	1280x720	50
	1280x720	60
	1280x768	60
	1280x800	60
SXGA	1280x1024	60
	1280x1024	75
	1280x1024	85
SXGA+	1400x1050	60
UXGA	1600x1200	60
MAC LC 13	640x480	66.66
MAC II 13	640x480	66.68
MAC 19	1024x768	75
MAC	1152x870	75.06
MAC G4	640x480	60
i MAC DV	1024x768	75
	1152 x 870	75
	1280 x 960	75

## Digital

Compatibility	Resolution	V-Sync [Hz]
VGA	640x480	60
	640x480	72
	640x480	75
	640x480	85
	720x400	70
	720x400	85
SVGA	800x600	56
	800x600	60
	800x600	72
	800x600	75
	800x600	85
	832x624	72
XGA	1024x768	60
	1024x768	70
	1024x768	75
	1024x768	85
	1152x864	60
	1152x864	70
	1152x864	75
	1152x864	85
WXGA	1280x768	60
	1280x800	60
SXGA	1280x1024	60
	1280x1024	75
	1280x1024	85(Sub-sampling mode)
SXGA+	1400x1050	60 (Sub-sampling mode)
UXGA	1600x1200	60 (Sub-sampling mode)
MAC G4	640x480	60
	640x480	70

# Disassembly Process

## 2-1 Equipment Needed & Product Overview

1. Screw Bit (+) :105
2. Screw Bit (+) :107
3. Screw Bit (-) :107
4. Hex Sleeves 5 mm
5. Tweezers
6. Projector

*\* Before you start: This process is protective level II. Operators should wear electrostatic chains.*

*\* Note: - If you need to replace the main board, you have to get into service mode and record the lamp usage hour.*

*- As the process of EP721/727/723/728 Family / EW1610 Family, disassembling is the same as EP721, we take EP721 for example here.*





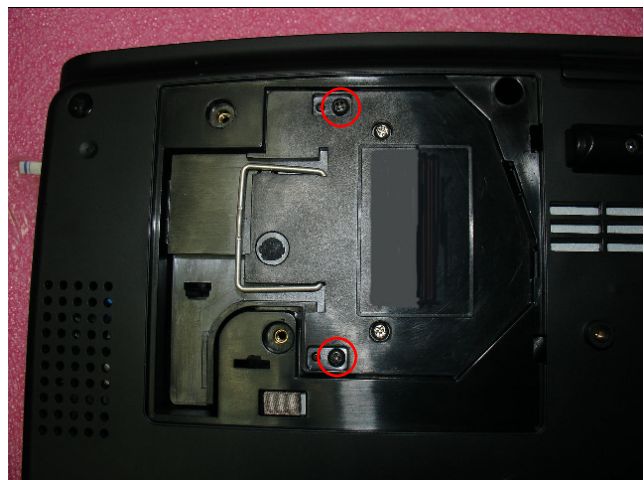
## 2-2 Disassemble Lamp Cover

1. Unscrew 2 screws to disassemble the Lamp Cover.



## 2-3 Disassemble Lamp Module

1. Unscrew 2 screws then pull out the Lamp Module.



## 2-4 Disassemble Top Cover Module

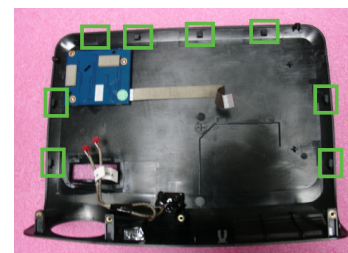
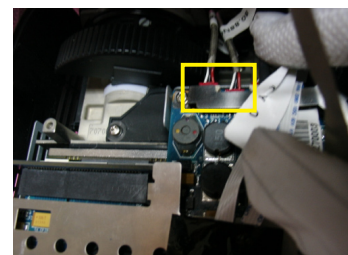
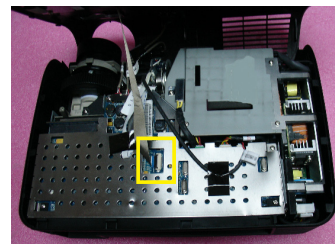
1. Unscrew 6 screws (4 screws on the unit base and 2 screws on the beside) and 3 connectors.

Note: - Push the top cover (as the red arrow) then pull up it. Because there are 8 tenons on it.

- Avoid damage by pulling and dragging IR cable and keypad FPC cable.

- Hold the CNNT plug when pulling the FPC cable is strongly recommended. Pulling the cable directly from the unit will cause the cable damages.

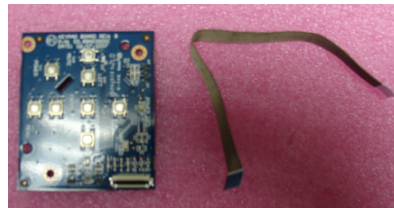
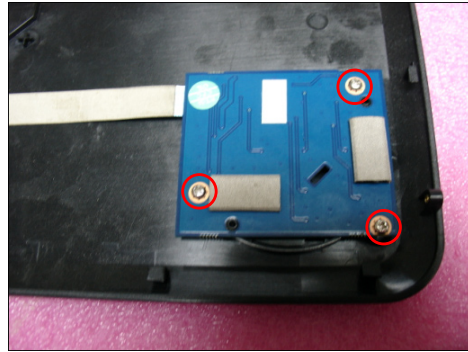
- Make sure cables are plug in the correct ports when assembling the unit.



## 2-5 Disassemble Keypad Board and Keypad

1. Unscrew 3 screws and unplug 1 FPC Cable to disassemble the Keypad Board.
2. Separate the Keypads from Top Cover.

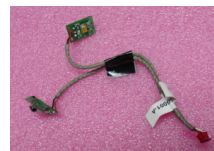
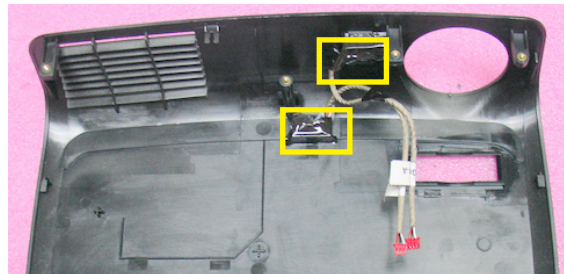
*Note: - Make sure cables plug into the correct ports when assembling the unit.*



## 2-6 Disassemble IR Sensor

1. Use tweezers to take off the black film tape, then press two tenons to disassemble the IR Sensor. The other disassemble same as above.

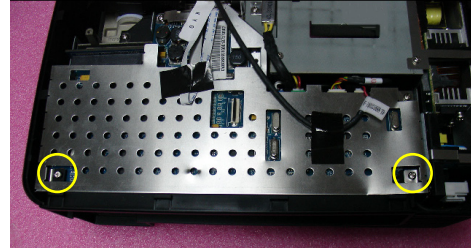
*Note: - When you disassemble the IR Sensor, you should use two fingers to parallel pull out the hook.*





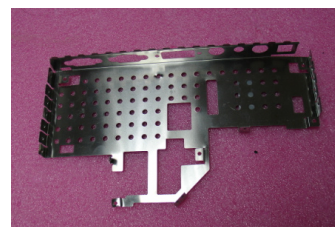
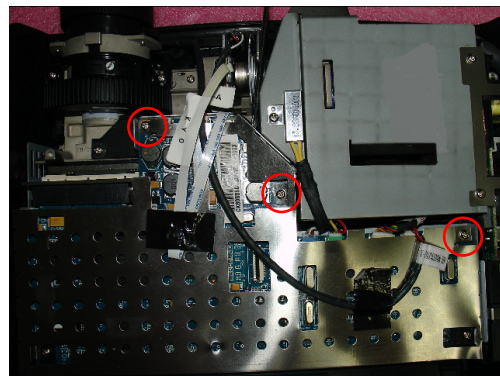
## 2-7 Disassemble I/O Cover

1. Unscrew 6 hex screws(on the rear cover).
2. Unscrew 2 screws(on the top shielding).



## 2-8 Disassemble Top Shielding

1. Unscrew 3 screws to disassemble Top Shielding.

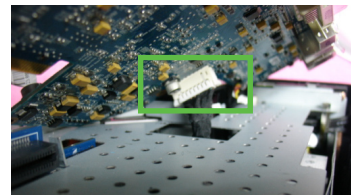
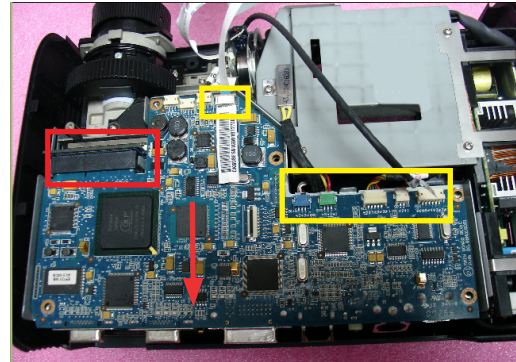


## 2-9 Disassemble Main Board

1. Unplug 8 connectors.

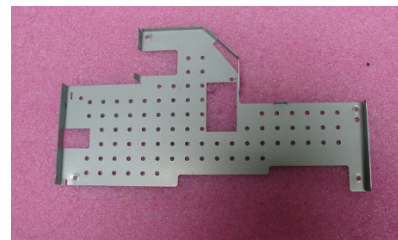
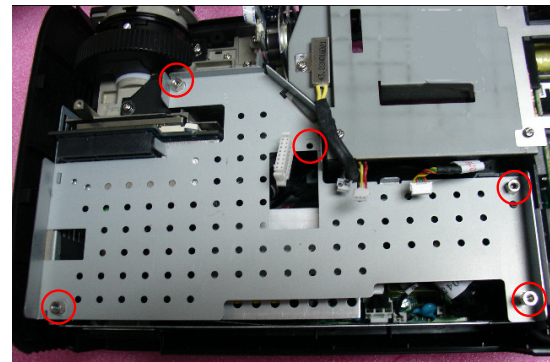
*Note: - First unplug 6 connectors(as yellow squares) then push the Main Board as the red arrow,at last unplug the connector (as green square)*

- Make sure cables plug into the correct ports when assembling the unit.



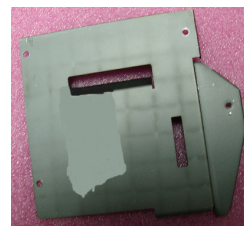
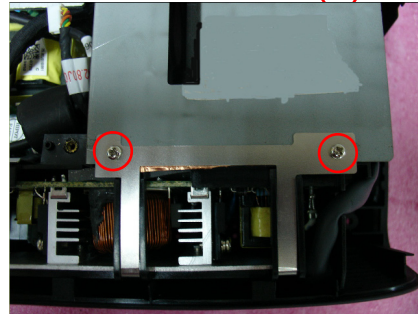
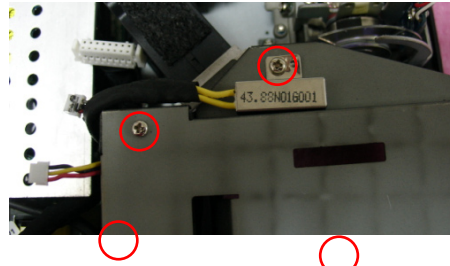
## 2-10 Disassemble Main Board Shielding

1. Unscrew 5 screws to disassemble Main Board Shielding.



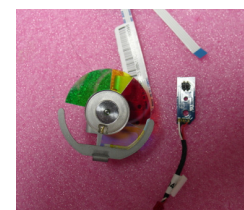
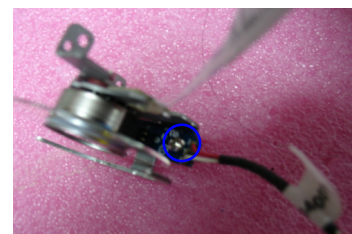
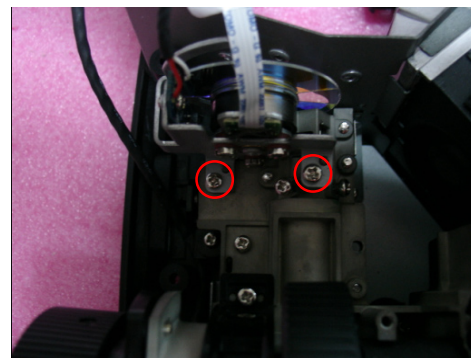
## 2-11 Disassemble Lamp House Shielding

1. Unscrew 4 screws to disassemble Lamp House Shielding.



## 2-12 Disassemble Color Wheel and Photo Sensor Board

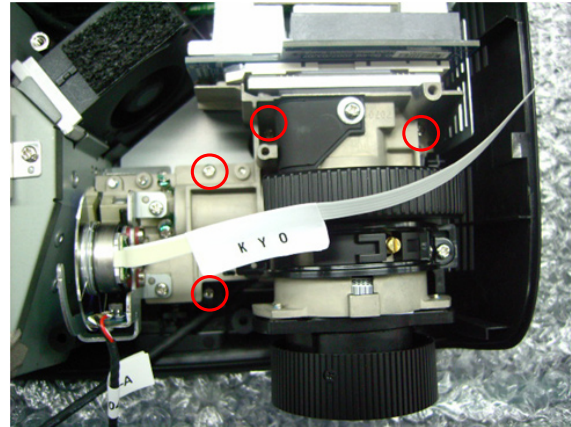
1. Unscrew 2 screws (as red circle) to disassemble color wheel module.
2. Unscrew 1 screw from color wheel module (as blue circle) and take out the photo sensor board.





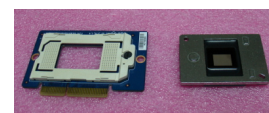
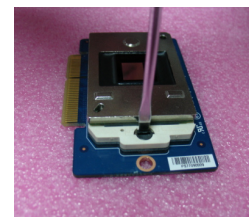
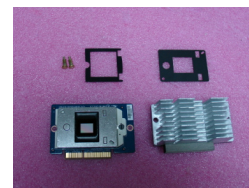
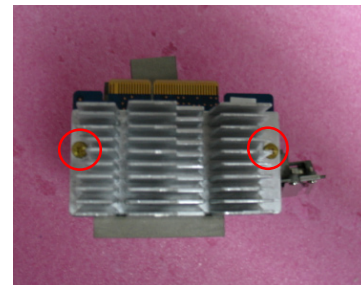
## 2-13 Disassemble Engine Module

1. Unscrew 4 screws to disassemble Engine Module.



## 2-14 Disassemble DMD Board and DMD Chip

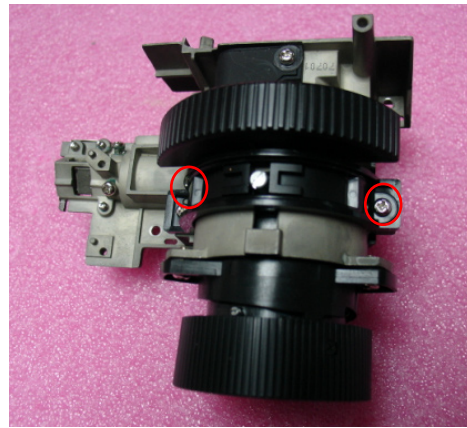
1. Unscrew 2 screws on the Engine Module, disassemble DMD Module and Heat Sink.
2. Unlock the lockhole by Screw Bit (-) to disassemble the DMD chip from the DMD board.



*Note: - Avoid damage by touching the DMD chip.*

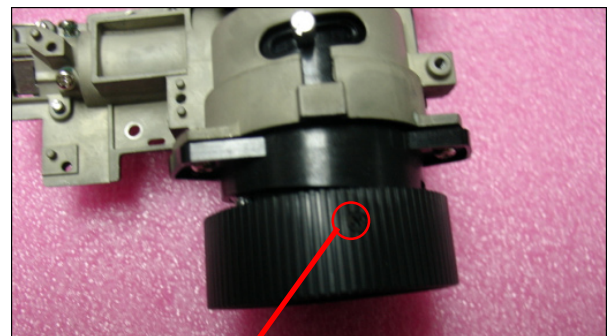
## 2-15 Disassemble Zoom Ring

1. Unscrew 2 screws to disassemble Zoom Ring.



## 2-16 Disassemble Focus Ring

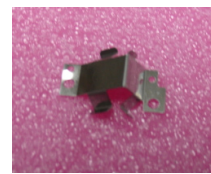
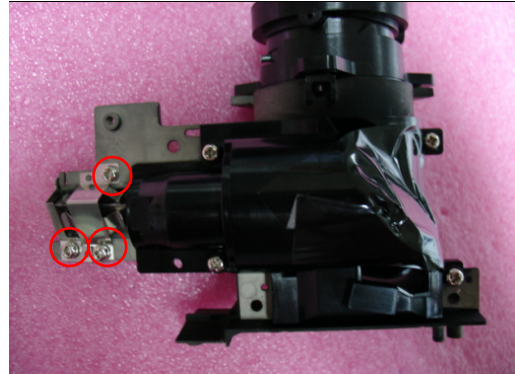
1. Unscrew 3 screws to disassemble Focus Ring.





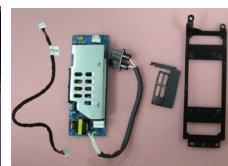
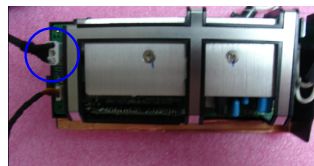
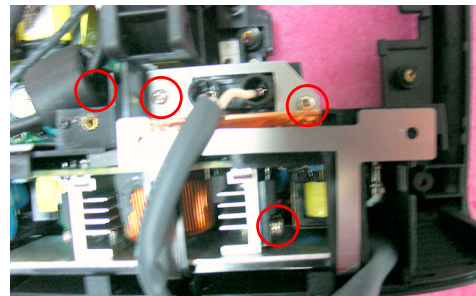
## 2-17 Disassemble Rod Module

1. Unscrew 3 screws to disassemble Rod Module.
2. Separate Rod Spring and Rod.



## 2-18 Disassemble Lamp Driver Module and Fan

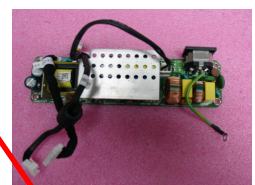
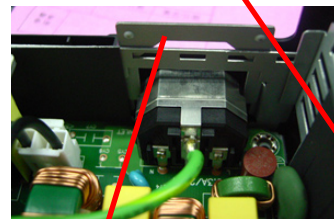
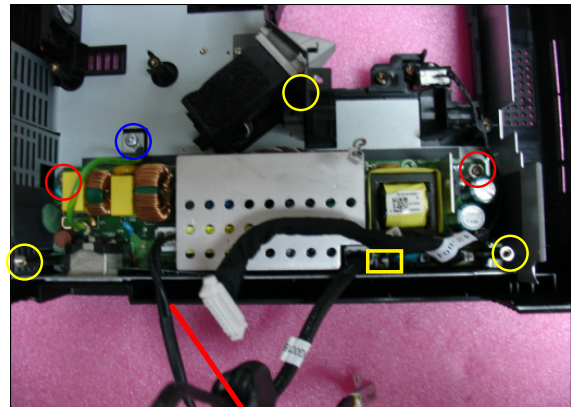
1. Unscrew 4 screws (as red circle) and 1 connector (as blue circle) to take out the lamp driver from bottom cover.
2. Separate the lamp driver and lamp driver bracket.
3. Disassemble the Fan from system.



## 2-19 Disassemble LVPS Module

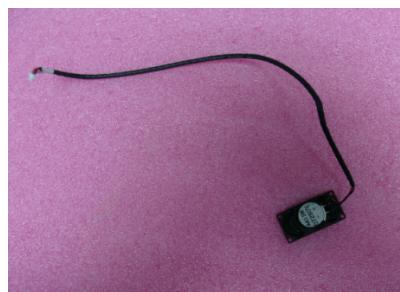
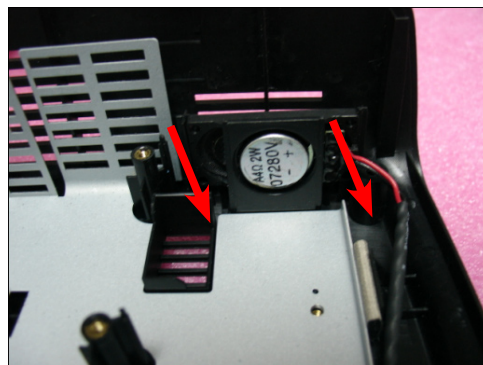
1. Unscrew 3 hex screws(as yellow circle) 2 screws(as red circle) and 1 screw (as blue circle).
2. Unplug1connector,disassemble LVPS Module.
3. Unplug1connector,disassemble thermal switch from LVPS Module.

*Note: - When you disassemble the Iron Cut, you should use tweezers to raise up it, then use two fingers pull it out the hook.*



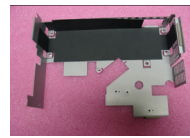
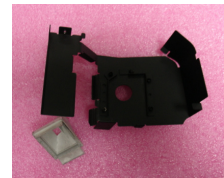
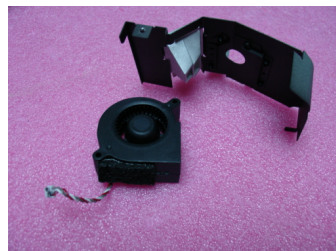
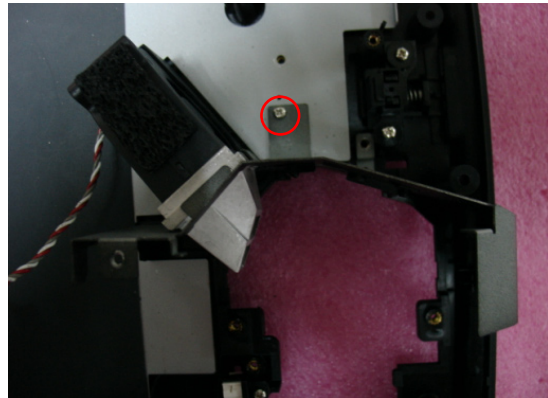
## 2-20 Disassemble Speaker

1. Separate the speaker from the bottom cover.
- When you disassemble the speaker, you should use two fingers to pull the bracket as the red direction, then take out the speaker.*



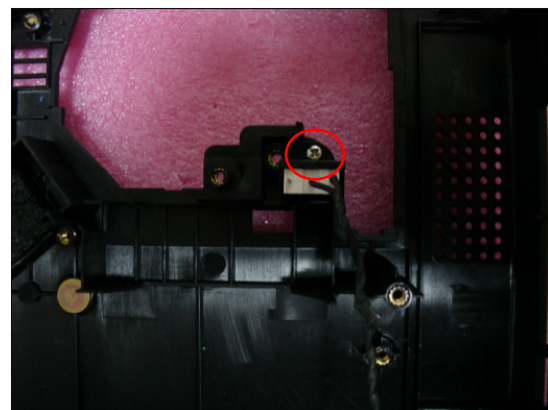
## 2-21 Disassemble Blower Module, Duct module and LVPS Sheetmetal module.

1. Unscrew 1 screw to disassemble Blower module and Duct module.
2. Separate the Duct module.
3. Take out the LVPS Sheetmetal module.



## 2-22 Disassemble Limit Switch

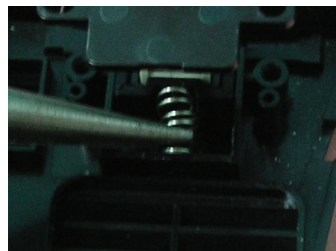
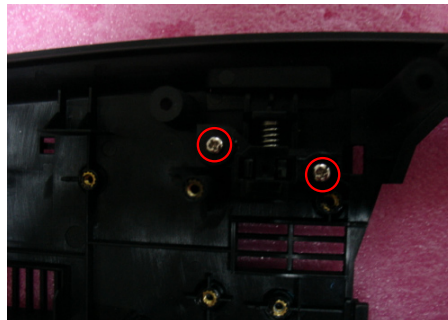
1. Unscrew 1 screw to disassemble Limit Switch.





## 2-23 Disassemble Elevator

1. Unscrew 2 screws.
2. Use tweezers to take out the short spring.
3. Turn off the bottom cover to unscrew 1 screw.
4. Separate the rest Elevator module.



## 2-24 Disassemble Adjust Foot

1. Unscrew 1 hex nut.
2. Turn off the bottom cover,unscrew adjust foot.



# Troubleshooting

## 3-1 LED Lighting Message

Message	Power LED (Green/Amber)	Temp-LED (Red)	Lamp-Led (Red)
Standby State (input power cord)	Flashing Amber	○	○
Power on (Warming)	Flashing Green	○	○
Lamp Lighting	Green	○	○
Error (Over Temp)	○	*	○
Error (Fan Fail)	○	Flashing (0.5s on,0.5s off)	○
Error (Lamp Fail)	○	○	*
Error (Color Wheel Fail)	Flashing Green	○	○


Note: Steady Light: \*

No Light: ○

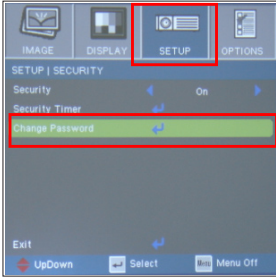

## 3-2 Main Procedure

No	Symptom	Procedure
1	No Power	<ul style="list-style-type: none"> <li>- Ensure the Power Cord and AC Power Outlet are securely connected</li> <li>- Check Lamp Cover and Interrupt Switch</li> <li>- Ensure all connectors are securely connected and aren't broken</li> <li>- Check Lamp Driver</li> <li>- Check LVPS</li> <li>- Check Main Board</li> </ul>
2	Auto Shut Down	<ul style="list-style-type: none"> <li>- Check LED Status <ul style="list-style-type: none"> <li>a. Lamp LED Light Red, Power LED OFF, Temp-LED OFF <ul style="list-style-type: none"> <li>- Check Lamp</li> <li>- Check Lamp Driver</li> <li>- Check Main Board</li> </ul> </li> <li>b. Temp LED Light Red, Power LED OFF, Lamp LED OFF <ul style="list-style-type: none"> <li>- Check Thermal Sensor</li> <li>- Check Thermal Switch</li> <li>- Check Fan</li> </ul> </li> <li>c. Power LED Flashing Amber, Lamp LED OFF, Temp LED OFF <ul style="list-style-type: none"> <li>- Check Color Wheel</li> <li>- Check Photo Sensor</li> </ul> </li> </ul> </li> </ul>
3	No Light On	<ul style="list-style-type: none"> <li>- Ensure all connectors are securely connected and aren't broken</li> <li>- Check Lamp Module</li> <li>- Check Lamp Driver</li> <li>- Check LVPS</li> <li>- Check Main Board</li> </ul>
4	No Image	<ul style="list-style-type: none"> <li>- Ensure the Signal Cable and Source work (If you connect multiple sources at the same time, use the "Source" button on the control panel to switch)</li> <li>- Ensure all connectors are securely connected and aren't broken</li> <li>- Check Main Board</li> <li>- Check DMD Board</li> <li>- Check Color Wheel</li> <li>- Check DMD Chip</li> <li>- Check Engine Module</li> </ul>

No	Symptom	Procedure
5	Mechanical Noise	<ul style="list-style-type: none"> <li>- Check Color Wheel</li> <li>- Check Fan Module</li> </ul>
6	Line Bar/Line Defect	<ul style="list-style-type: none"> <li>- Check if the Main Board and the DMD Board are assembled properly</li> <li>- Check Main Board</li> <li>- Check DMD Board</li> <li>- Check DMD Chip</li> </ul>
7	Image Flicker	<ul style="list-style-type: none"> <li>- Do "Reset (All data)" of the OSD Menu</li> <li>- Ensure that the signal cables and source are work as well</li> <li>- Check Lamp Module</li> <li>- Check Color Wheel</li> <li>- Check DMD Board</li> <li>- Check Main Board</li> </ul>
8	Color Abnormal	<ul style="list-style-type: none"> <li>- Do "Reset (All data)" of the OSD Menu</li> <li>- Adjust Color Wheel Index</li> <li>- Check Main Board</li> <li>- Check DMD Board</li> <li>- Check Color Wheel</li> </ul>
9	Poor Uniformity/ Shadow	<ul style="list-style-type: none"> <li>- Ensure the projection screen without dirt</li> <li>- Ensure the projection lens is clean</li> <li>- Ensure the Brightness is within spec</li> <li>- Check rod alignment</li> <li>- Check Engine Module</li> </ul>
10	Dead Pixel/Dust (Out of spec.)	<ul style="list-style-type: none"> <li>- Ensure the projection screen without dirt</li> <li>- Ensure the projection lens is clean</li> <li>- Clean DMD Chip and Engine Module</li> <li>- Check DMD Chip</li> <li>- Check Engine Module</li> </ul>
11	Garbage Image	<ul style="list-style-type: none"> <li>- Ensure that the signal cables and source work as well.</li> <li>- Check Main Board</li> <li>- Check DMD Board</li> </ul>

No	Symptom	Procedure
12	Remote Control/ Control Panel Failed	<ul style="list-style-type: none"> <li>- Remote Control               <ul style="list-style-type: none"> <li>a. Check Battery</li> <li>b. Check Remote Controller</li> <li>c. IR receiver</li> <li>d. Check Main Board</li> </ul> </li> <li>- Control Panel               <ul style="list-style-type: none"> <li>a. Check FPC</li> <li>b. Check keypad</li> <li>c. Check Main Board</li> </ul> </li> </ul>
13	Function Abnormal	<ul style="list-style-type: none"> <li>- Do "Reset (All data)" of the OSD Menu</li> <li>- Check Main Board</li> <li>- Check DMD Board</li> </ul>
14	Forgetting Password (administrator Password)	<ul style="list-style-type: none"> <li>- When the Password Protect is on, you must enter the password before you can turn on the projector. If you forget the password, the Universal Password will enable you start the projector up and reset the password.</li> <li>- The EP721's Universal Password is 2468. (As the Universal Password of EP721/727/723/728 Family / EW1610 Family is the same as EP721, we take EP721 for example here.)</li> <li>- Universal Password is the password of Administrator. It can be accepted by projector anytime no matter what the projector's password is.</li> <li>- If you forget the Password, how to get the Universal Password? When you turn on the projector, the message "Enter Security Code" appears. Please Input the "Current Security Code 2468" by Remote Control, then press "Enter".</li> </ul> 



No	Symptom	Procedure
	Forgetting Password (administrator Password)	<p>- Select "Setup", then select "Change Password", and press "Enter" button.</p>  <p>- The message "Enter New Security Code" appears. Input a 4-digits code (letters and/or numbers) that you define.</p>  <p>- To confirm, enter the password again. The "Security Code change successfully" appear on the screen.</p>

# Function Test & Alignment Procedure

---

## 4-1 Test Equipment Needed

- IBM PC with XGA/WXGA resolution
- DVD player with Multi-system, equipped "Component", "S-Video", "Composite" and "HDMI."
- HDTV Source (480P, 720P, 1080i, 1080P)
- Minolta CL-100
- Quantum Data 802B or CHROMA2327 (Color Video Signal & Pattern Generator)
- After changing parts, check the information below

## 4-2 Service Mode

1. Turn on the projector
2. Do the following actions sequentially to get into service mode.
  - (1) Press "Power", "Left", "Left" and "menu" button sequentially.
  - (2) Service Mode will be shown.
  - (3) Choose "Exit" to leave the Service Mode after all.

## 4-3 OSD Reset

1. After final QC step, we have to erase all saved change again and restore the OSD default setting. The following actions will allow you to erase all end-users' settings and restore the default setting:
  - (1) Please get into OSD menu.
  - (2) To execute "Reset" function.

## 4-4 Test Condition

- Circumstance brightness: Dark room less than 5.0 lux
- Inspection distance: 1.8m~2.5m functional inspection
- Screen size: 60 inches diagonal
- After repairing each (EP721/727/723/728 Family / EW1610 Family), the unit should be run-in (refer to the table below)

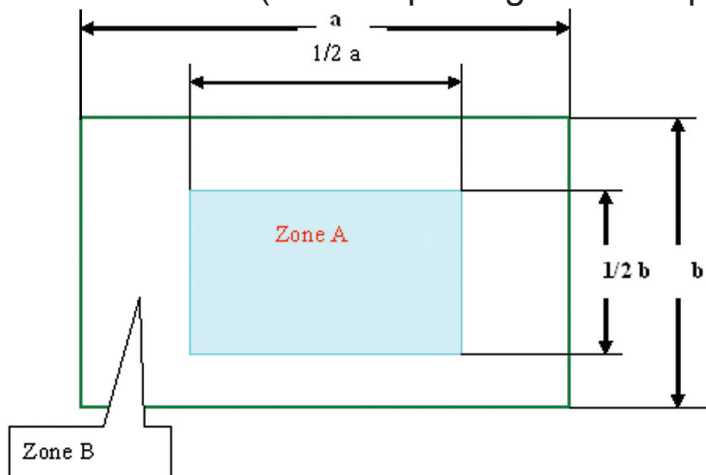
Symptom	Run-in Time
Normal repair	2 hours
NFF	4 hours
Auto shutdown	6 hours

- Get into Burn-In Mode

\* Cycle setting is based on the defect symptoms. ie: If it is NFF, the run-in time is 4 hours. You have to set the lamp on for 50 min. and lamp off for 10 min for 4 cycles.

Press power > left > left > Menu	
Choose Burn-In Test > enter	
Lamp On (Min)	Press right key to adjust the time (50)
Lamp Off (Min)	Press right key to adjust the time (10)
Set burn in cycle	Press right key to adjust the cycle
After setting up the time, choose Burn-In mode and hit enter	

### Screen Defects (While replacing DMD Chip, DMD BD and MB)



< Figure: Zone A & B Definition >

## Defect specification table

Order	Symptom	Pattern	Criteria
1	Bright pixel ( dots)	Black pattern ( IRE=O)	A+B=0
2	Dark pixel(dots)	White pattern	A+B≤3
3	Unstable pixel (dots)	White & Black pattern	A+B≤1
4	Adjacent dark pixel (dots)	White & Black pattern	A+B=0
5	Dark blemish (Dirty)	Blue 60 pattern	A+B≤4 (diameter <1/2 inch)
6	Bright blemish (Dirty)	Gray 30 pattern	A+B≤4 (diameter <1/2 inch)
7	Bright dot on frame	Black pattern	1

## 4-5 Test Inspection Procedure

Change parts Update	Main Board	Firmware	Color Wheel	Lamp Module	Engine Module	ROD Module
Version Update	v	v				
Color Wheel Index	v		v			
Reset lamp hour				v		
OSD	v	v				
EDID	v					
Re-write Lamp Hour Usage	v					
ROD Adjustment					v	v

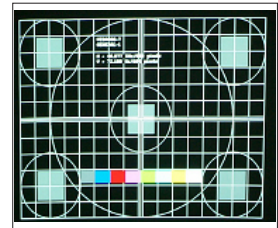
*Note: If Color appears abnormal after changing Main Board Module, please do Color Wheel index adjustment.*

## 4-6 PC MODE

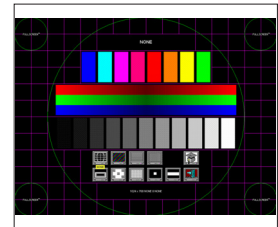
### 1. Frequency and tracking boundary

#### Procedure

- Test equipment: video generator
- Test signal: analog 800 x 600@60Hz (EP721/723 Family)  
1024 x 768@60Hz (EP727/728 Family)  
1280 x 800@60Hz (EW1610 Family)
- Test Pattern: General-1 or Master
- Check and see if the image sharpness is well-performed
- If not re-adjust by the following steps:
  - (1) Select "Frequency" function to adjust the total pixel number of pixel clock in one line period
  - (2) Select "Tracking" function and use right or left arrow key to adjust the value to minimize video flicker
- Adjust Resync or Frequency/Tracking/H. Position/V. Position to the inner screen.



General-1



Master

#### Inspection item

- Eliminate visual wavy noise by Rsync, Frequency or Tracking selction
- Check if there is noise on the screen
- Horizontal and vertical position of the vedio should be adjustable to the screen frame

#### Criteria

- If there is noise on the screen, the product is consid-ered as faliure product
- If there is noise on the screen, use auto or manul "frequency" function or "tracking" function to adjust the screen
- The PC mode functionally sure be workable include support format with frequency and auto detected functional will be workable

### 2. Light Leak

#### Procedure

- Test equipment: video generator
- Test signal: analog 800 x 600@60Hz (EP721/723 Family)

1024 x 768@60Hz (EP727/728 Family)

1280 x 800@60Hz (EW1610 Family)

- Test Pattern: Gray 10
- Check if the light leaks
  - \* Light leak on reflective edge, eyecatcher, bond-wires and exposed metal.

Inspection item

- Light leak check
- Bright blemish (dirty)

Criteria

- The pattern cannot accept the color level of the leakage is brighter than the gray 10 pattern
- Ref. Defect Specification table

Note: The defect criteria follows TI specification



Gray 10

### 3. Blemish (Dark)

Procedure

- Test equipment: video generator
- Test signal: analog 800 x 600@60Hz(EP721/723 Family)  
1024 x 768@60Hz (EP727/728 Family)  
1280 x 800@60Hz (EW1610 Family)

- Test Pattern: Blue 60

Inspection item

- Dark blemish check. (dirty)

Criteria

- The dark blemish is unacceptable in zone A.  
The number of dark blemish is less or equal to 4 pixels in zone B.

- Ref. Defect Specification table

Note: The defect criteria follows TI specification



Blue 60

### 4. Blemish (Bright)

Procedure

- Test equipment: video generator
- Test signal: analog 800 x 600@60Hz(EP721/723 Family)  
1024 x 768@60Hz(EP727/728 Family)  
1280 x 800@60Hz(EW1610 Family)

- Test Pattern: Gray 30

Inspection item

- Dark blemish check.(dirty)

Criteria

- The bright blemish is unacceptable when it is more



Gray 30

than 4 pixels on gray 30 pattern  
 - Ref. Defect Specification table  
 Note: The defect criteria follows TI specification

## 5. Dead Pixel (Bright pixel)

Procedure	<ul style="list-style-type: none"> <li>- Test equipment: video generator</li> <li>- Test signal: analog 800 x 600@60Hz (EP721/723 Family) 1024 x 768@60Hz (EP727/728 Family) 1280 x 800@60Hz (EW1610 Family)</li> <li>- Test Pattern: Full black</li> </ul>
Inspection item	<ul style="list-style-type: none"> <li>- Bright pixel check</li> </ul> <p>Note: Frame dimension under operative zone 1 inch</p>
Criteria	<ul style="list-style-type: none"> <li>- Bright pixel is unacceptable except that 1 pixels is allowed on frame edge.</li> <li>- Ref. Defect Specification table</li> </ul> <p>Note: The defect criteria follows TI specification</p>



*Full black*

## 6. Dead Pixel (Dark pixel)

Procedure	<ul style="list-style-type: none"> <li>- Test equipment: video generator</li> <li>- Test signal: analog 800 x 600@60Hz (EP721/723 Family) 1024 x 768@60Hz (EP727/728 Family) 1280 x 800@60Hz (EW1610 Family)</li> <li>- Test Pattern: Full white</li> </ul>
Inspection item	<ul style="list-style-type: none"> <li>- Dead pixel check</li> <li>- White pattern (IRE=100)</li> <li>- Adjacent dark pixel</li> </ul>
Criteria	<ul style="list-style-type: none"> <li>- The number of the dead pixels should be less or equal to 3 pixels</li> <li>- Adjacent pixel with each other is unacceptable</li> <li>- Ref. Defect Specification table</li> </ul> <p>Note: The defect criteria follows TI specification</p>

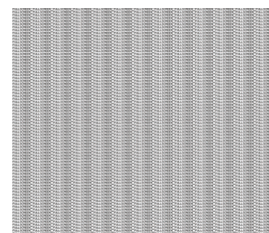


*Full white*

## 7. Focus test

### Procedure

- Test equipment: video generator
- Test signal: analog 800 x 600@60Hz(EP721/723 Family)  
1024 x 768@60Hz(EP727/728 Family)  
1280 x 800@60Hz(EW1610 Family)



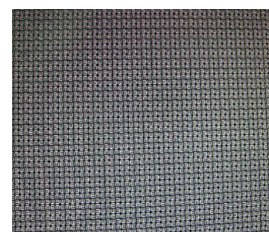
Full screen

### Inspection item

- Test Pattern: Full screen or MEME Sony

### Criteria

- Focus check
- From screen 1.5 M via visual to check the focus, look at the entire screen, focus shall be clear, crisp, and sharp over the entire surface of the display pattern. (Blur word on one of the corner after adjustment is acceptable. However, the word should at least be recognizable.)

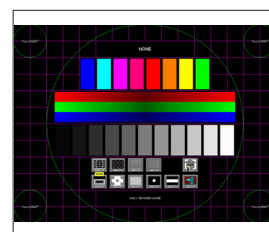


MEME Sony

## 8. Color performance

### Procedure

- Test equipment: video generator
- Test signal: DVI (HDMI) 720p,1080i,1080P
- Test Pattern: Master, 64 GRAY RGBW or SMPTE RP-133
- \* Please refer to 4-2 to get into service mode. Use 720P, 1080i&1080P signal, master pattern to do HDTV test. Color cannot discolor to purple and blue.



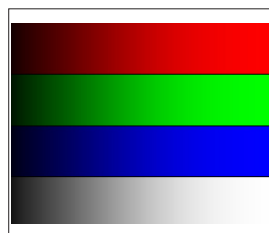
Master

### Inspection item

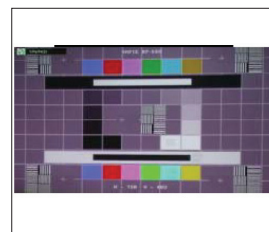
- Check if each color level is well-functioned
- color saturations

### Criteria

- Screen appears normal. It should not have any abnormal condition, such as lines appear on the screen and so on
- Color appears normal
- It is acceptable to have few lines flashing at the center and on the edge of 1080i image. However, rest of the image should appears stable
- RGBW should all appear normal on the screen and sort from R-G-B-W
- Color levels should be sufficient and normal. (the



64 GRAY RGBW



SMPTE RP-133



- unidentified color levels on both left and right sides should not over 8 color levels.)
- Grey level should not have abnormal color or heavy lines.
  - The PC mode functionally sure be workable include support format with frequency and auto detected functional will be workable.

## 4-7 Video Performance

### 1. CVBS

- |                     |   |
|---------------------|---|
| Procedure           | - Test equipment: DVD player<br>- Test signal: CVBS   |
| Inspection item     | - Video performance test  |
| Inspection Distance | - 1.8 M ~2.5 M  |
| Criteria            | - Check any abnormal color, line distortion or any noise on the screen<br>- Check the sound from speakers |



*Motion video*

### 2. S-Video

- |                     |   |
|---------------------|---|
| Procedure           | - Test equipment: DVD player<br>- Test signal: S-Video  |
| Inspection item     | - Video performance test  |
| Inspection Distance | - 1.8 M ~2.5 M  |
| Criteria            | - Check any abnormal color, line distortion or any noise on the screen<br>- Check the sound from speakers |

### 3. HDTV/ Component

- |           |                              |
|-----------|------------------------------|
| Procedure | - Test equipment: DVD player |
|-----------|------------------------------|

	- Test signal: Ycbcr/YPbPr
Inspection item	- HDTV performance test
Inspection Distance	- 1.8 M ~2.5 M
Criteria	- Check any abnormal color, line distortion or any noise on the screen.
	- Check the sound from speakers.

#### 4. Audio Test

Procedure	- Test equipment: DVD player
	- Test signal: CVBS
Inspection item	- Audio performance test
Inspection Distance	- 1.8 M ~2.5 M
Criteria	- Check the sound from speakers
	- Check "Volume" is normal
	- Check "Mute" is normal

## 4-8 Optical Performance Measure

Inspection Condition
- Environment luminance: 5 Lux
- Product must be warmed up for 3 minutes
- Distances from the screen: 2.38 M (EP721/727/723/728 Family)
2.00 M (EW1610 Family)
- Screen Size: 60 inches diagonal

#### 1. Test equipment

Procedure	- Test equipment: video generator
	- Test signal: analog 800 x 600@60Hz (EP721/723 Family)
	1024x768@60Hz (EP727/728 Family)
	1280 x 800@60Hz(EW1610 Family)

## 2. Brightness

### Procedure

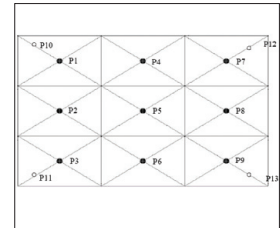
- Full white pattern
- Use CL100 to measure brightness values of P1~P9
- Follow the brightness formula to calculate brightness values

#### ☀ Brightness Formula

$$\text{Avg. (P1~P9)} \times 1.1\text{m}^2$$

### Criteria

- 800 lumen (EP721/727 Family)
- 1100 lumen (EP723/728 Family)
- 1000 lumen (EW1610 Family)



Full white pattern

## 3. Full On/Full Off Contrast

### Procedure

- Full white pattern & full black pattern
- Use CL100 to measure brightness values of full white pattern P5 & full black pattern B5 (see image: full white)
- Follow Contrast formula to calculate contrast values

#### ☀ Contrast Formula

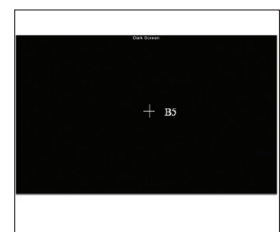
$$P5/B5$$

Note: P5=center of white image

B5 = the center of black image

### Criteria

- 1100:1 (EP721/727 Family)
- 1400:1 (EP723/728 Family)
- 450:1 (EW1610 Family)



Full black pattern

## 4. Uniformity

### Procedure

- Full white pattern
- Use CL100 to measure brightness values of P1~P9 (see image: full white)
- Follow the Uniformity formula to calculate average values

#### ☀ Uniformity Formula

$$\text{ANSI Uniformity} = \text{Avg. (P1, P3, P7, P9)} / P5 \times 100\%$$

### Criteria

- 65 %

## 4-9 Others

### 1. Functional Inspection

Keypad button	- All keypad buttons must operate smoothly.
General	- All OSD functions must be checked for functionality. When OSD menu is displayed, there shall be no visible peaking, ringing, streaking, or smearing artifacts on the screen.
Factory Default	- The factory settings (with appropriate centering, size, geometry distortion, etc.) shall be displayed upon "Recall" is selected from OSD.
Display Size	- All preset modes shall expand to full screen size using OSD Horizontal and Vertical Size controls.
Display Data Channel (DDC)	- The purpose of the DDC test is to verify the DDC1/DDC2B operation of the projector and to verify Plug & Play function.
Acoustic	- High pitch sound from cooling fan and color wheel is unacceptable.

## 2. Check points for exterior and print pattern

Check item	Check point
text & pattern	missing letters & pattern or blurry prints are unacceptable.
exterior	dirt, scrape, water ripples and uneven color are unacceptable.
buttons	stuck buttons are unacceptable.
Focus ring	Focus ring is functioning smoothly.
Logo	missing logo, missing prints and blurry prints are unacceptable
screw	All screws should be fixed and in right type.
elevator	Elevator is well-functioned. Stuck key is unacceptable.
pedestal	well-functioned
lamp cover	It should be locked in the correct place.
Plastic parts	All plastic parts can not be broken and damaged.
Safety or warning label	All safety and warning label should be visible, including all contents.
Connector	All interface connectors should be complete and workable.

# Firmware Upgrade

---

## 5-1 Equipment Needed

### Software : (DDP 2230- USB)

- DLP Composer
- Firmware
- Library file (library file has to put in PC and set right path in 5-4 step 4)

### Hardware :

- Projector
- Power cord:42.50115G001
- USB Cable:42.00280G001
- PC or Laptop

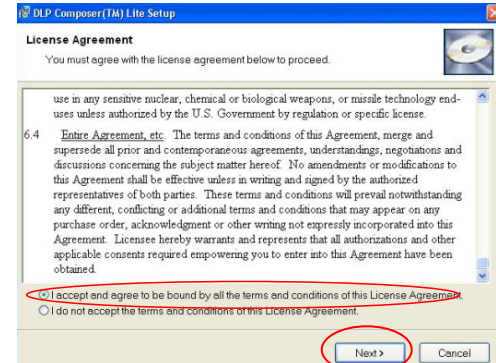
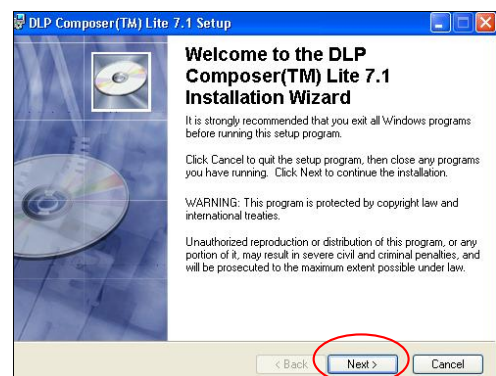
*Note: The FW upgrade procedure for EP721/727/723/728 Family / EW1610 Family is the same.*

*Here, we take EP721 as an example.*



## 5-2 DLP Composer Lite Setup Procedure

1. Choose "DLP Composer Lite V7.1 Setup" Program.
2. Click "Next" button
3. Read "License Agreement."
  - Choose "I accept and agree to be bound by all the terms and conditions of this License Agreement."
  - Click "Next" button.
4. Click "Next" button.

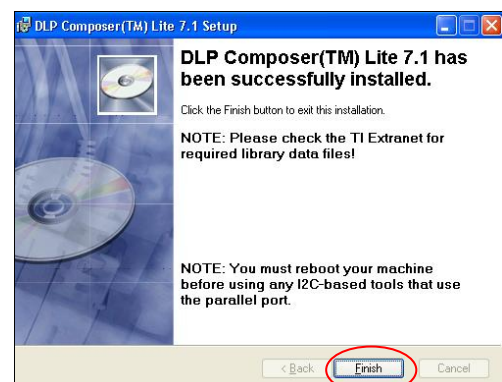
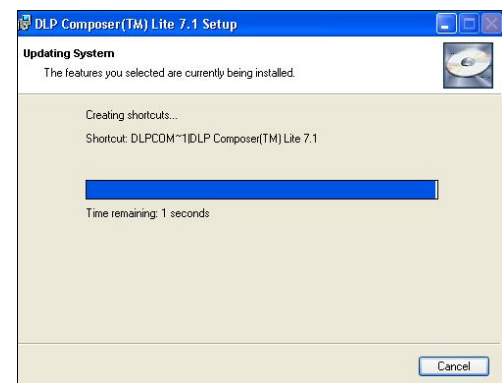
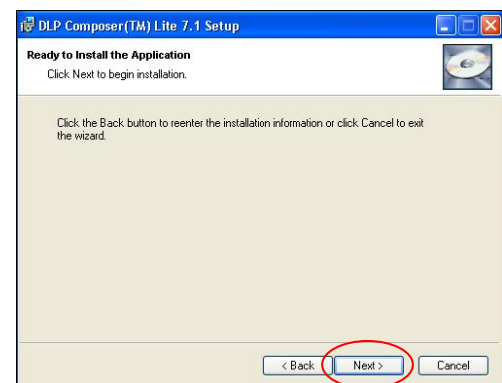
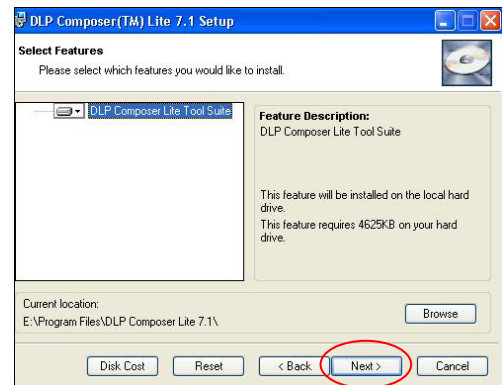


5. Click “Next” button.

6. Click “Next” button.

7. The program is executing "Initializing" status

8. Click “Finish.”





## 5-3 USB Driver Upgrade Procedure

### 1. set up

- Connect the Projector with PC by USB cable.
- It will show as the right picture.
- Select the item as red circle show.
- Click "Next" button.



### 2. Installation

- Click "Finish" and then the USB driver has been set up successfully.

*Note: If you have installed the USB driver, there is no need to perform this action.*



## 5-4 Firmware Upgrade Procedure

### 1. Set-up

- Hold on “power” button then plug in power cord and waiting for about 5 seconds.
- Once power, lamp and temp LED light up, plug in USB cable into the projector and link to the USB port of PC.

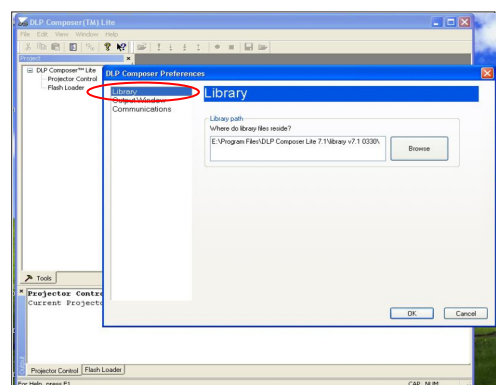
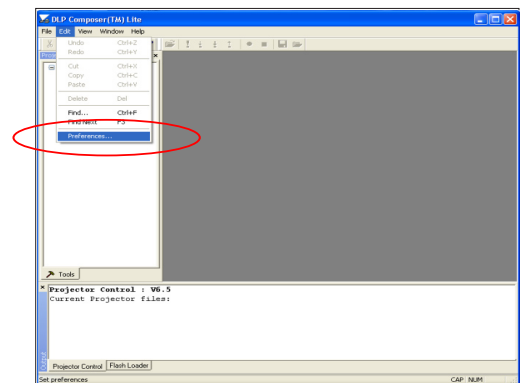
*Note: The system fan and the light will not operated.*

### 2. Execute the “DLP Compose™” file.

### 3. Click “edit” and “perferences.”

### 4. Click “Library.”

- Click the "browse" button and navigate to the directory where you put the DLP Composer installation files in.



5. Select “Edit\preferences\Communications”

- Choose “USB” and Click “OK”.

6. Choose “Flash Loader”.

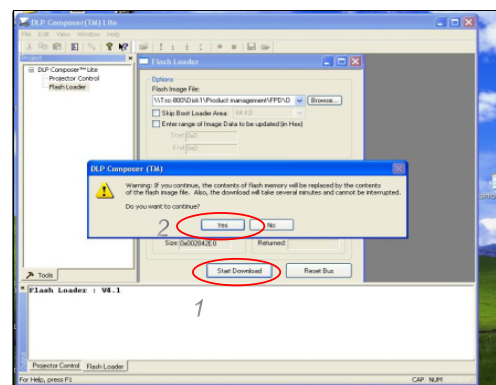
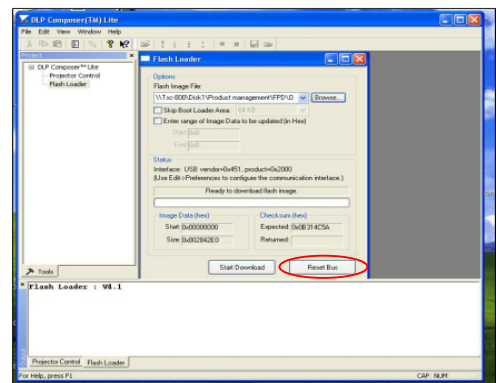
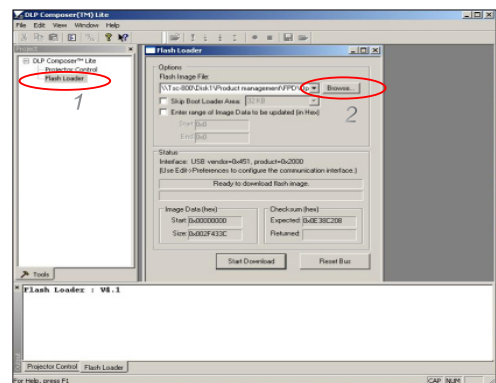
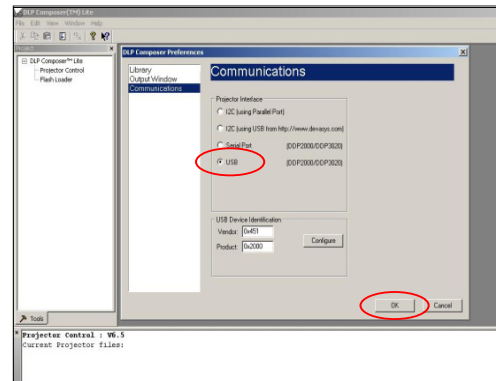
- Click “Browse” to search the firmware file.

7. Click “Reset Bus” to erase the flash memory.

*Note: If the error message “cannot open USB driver - No projectors found” appears, please unplug the USB Cable and replug, then check Driver. Finally, Repeat procedure 7. Click “Reset Bus” to erase the flash memory.*

8. If the firmware is ready, click “start download” to process the firmware upgrade.

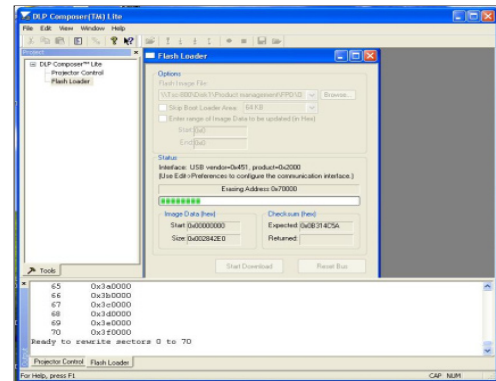
- Click “Yes” to erase the flash memory.



## 9. Proceeding Picture.

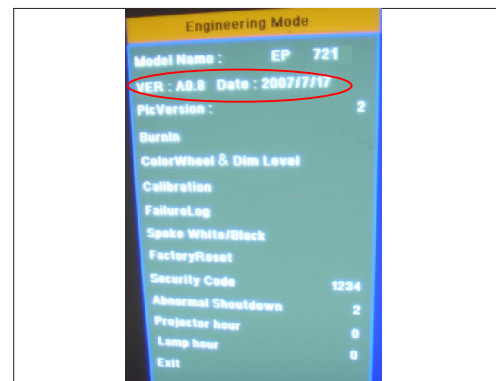
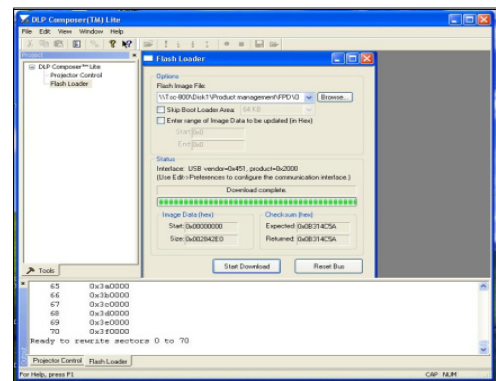
10. When firmware upgrade process is finished, the unit return to stand-by status. The LED power lights on and appears blue.

- Unplug USB cable and power cord and replug in power cable.



11. Restart the unit and get into the Service mode to check the firmware version.

(To get into Service mode, please Press “Power”, “Left”, “Left” and “menu” button sequentially.)



# EDID Upgrade

---

## 6-1 EDID Introduction

Extended Display Identification Data is a VESA standard data format that contains basic information about a display device and its capabilities, including vendor information, maximum image size, color characteristics, factory pre-set timings, frequency range limits, and character strings for the monitor name and serial number.

The information is stored in the display and is used to communicate with the system through a Display Data Channel (DDC), which sits between the display device and the PC graphics adapter. The system uses this information for configuration purposes, so the monitor and system can work together.

*Note: - If a display device has digital input ports, like DVI or HDMI, but without EDID in its main board, the display device will show no image while the input source is digital signal.*

*- The EDID upgrade procedure of EP721/727/723/728 Family / EW1610 Family is the same as EP721. Here, we take EP721 as an example.*

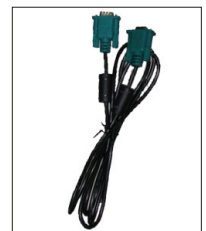
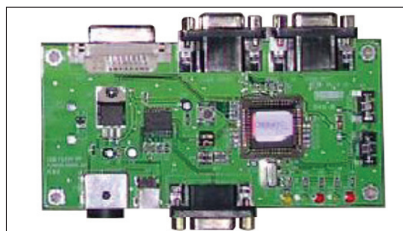
## 6-2 Equipment Needed

### Software

- EDID Program (Generic V0.51)
- EDID File (\*.ini)

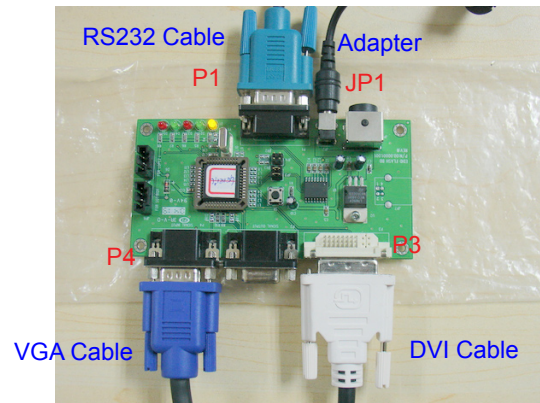
### Hardware

- Projector
- Generic Fixture :80.00001.001 for EDID Key-in (Fixture: JP3 must be closed)
- Power cord
- RS-232 Cable (pin to pin, F-M) : 42.83618G001
- Monitor
- PC
- VGA cable : 42.87305G001
- Power adapter for fixture : 47.57702G001
- VGA adapter for DVI : 42.83124G001



## 6-3 Setup Procedure

1. Connect all ports
  - Power adapter to fixture JP1
  - Fixture P1 to PC COM1 Port
  - Fixture P4 to Projector analog port
  - Fixture P3 to Projector digital port
  - Power on fixture



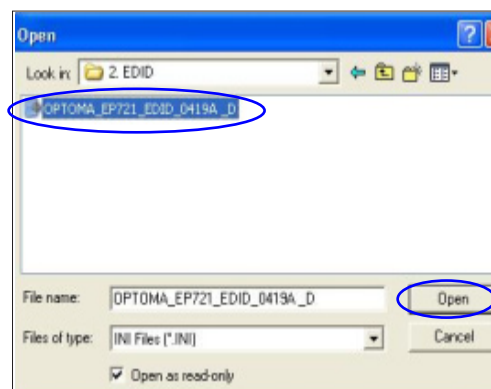
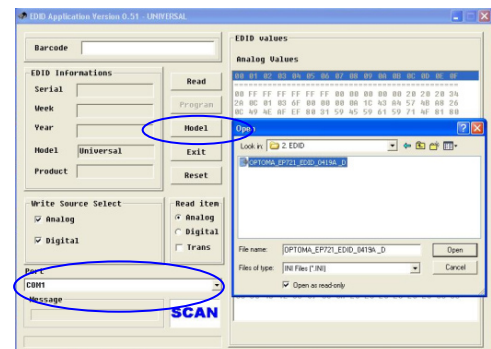
## 6-4 EDID Key-In Procedure

1. Double click "EDID" to execute EDID program.



2. Choose model

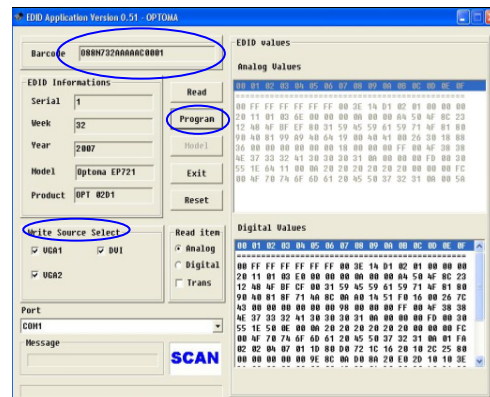
- In the port selection bar, please choose the port that you use. Example: if you use "COM1," choose COM1 in the port selection.
- Click on "Model".
- Choose the EDID that responds to the model that you choose.
- Click "Open".





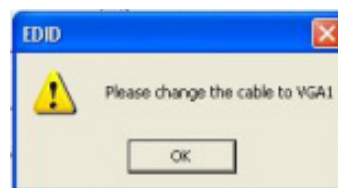
### 3. Programming

- key in the serial number into the barcode blank space.
- In "Write Source Select," make a check in "VGA1", "VGA2" and "DVI".
- Click "Program".



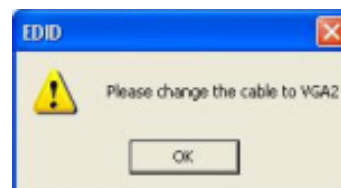
### 4. Change the cable to VGA1

- Message box appears on the screen, then click "OK".



### 5. Change the cable to VGA2

- Message box appears on the screen, Unplug VGA Cable to connect to adapter then plug in DVI port. After finish above action, click "OK".

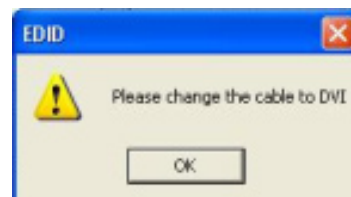


### 6. Change the cable to DVI

- Message box appears on the screen, unplug the adapter then plug the DVI Cable. After finish above action, click "OK".



- 7. When the EDID program is completed, a message "OK" will appear on the screen.



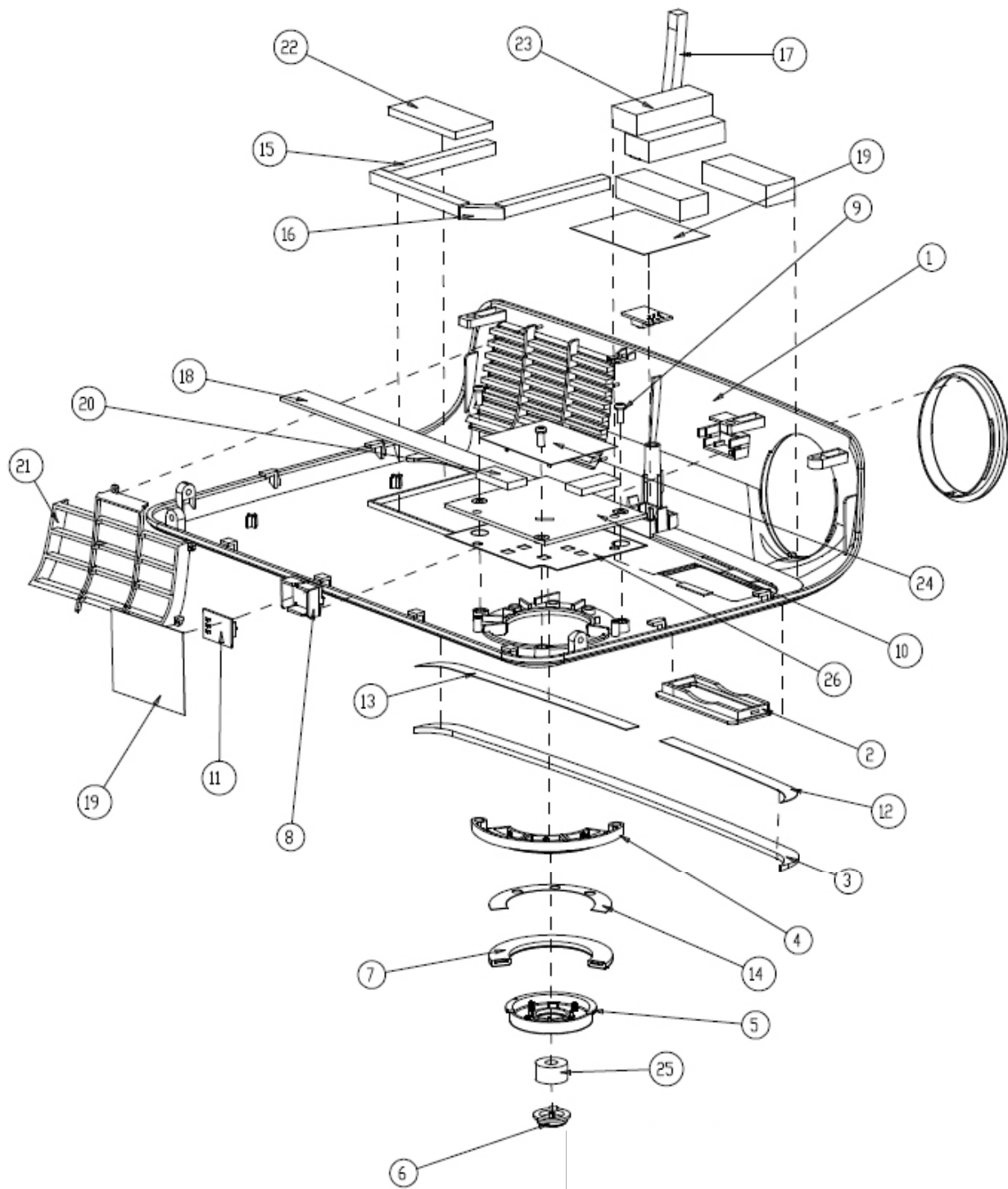


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# Appendix A

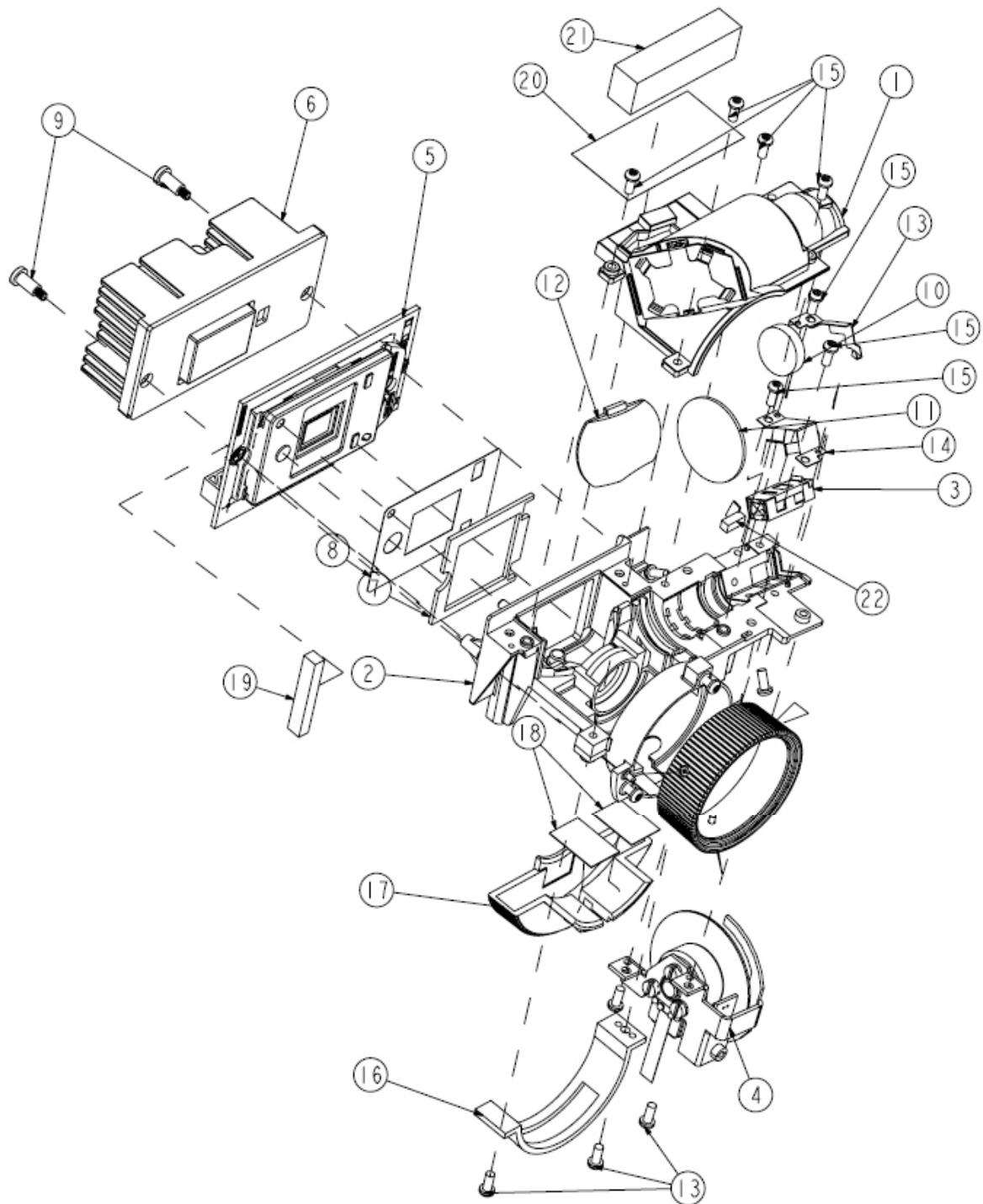
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## Assy Top case Module EP721/727/723/728/EW628/EW1610



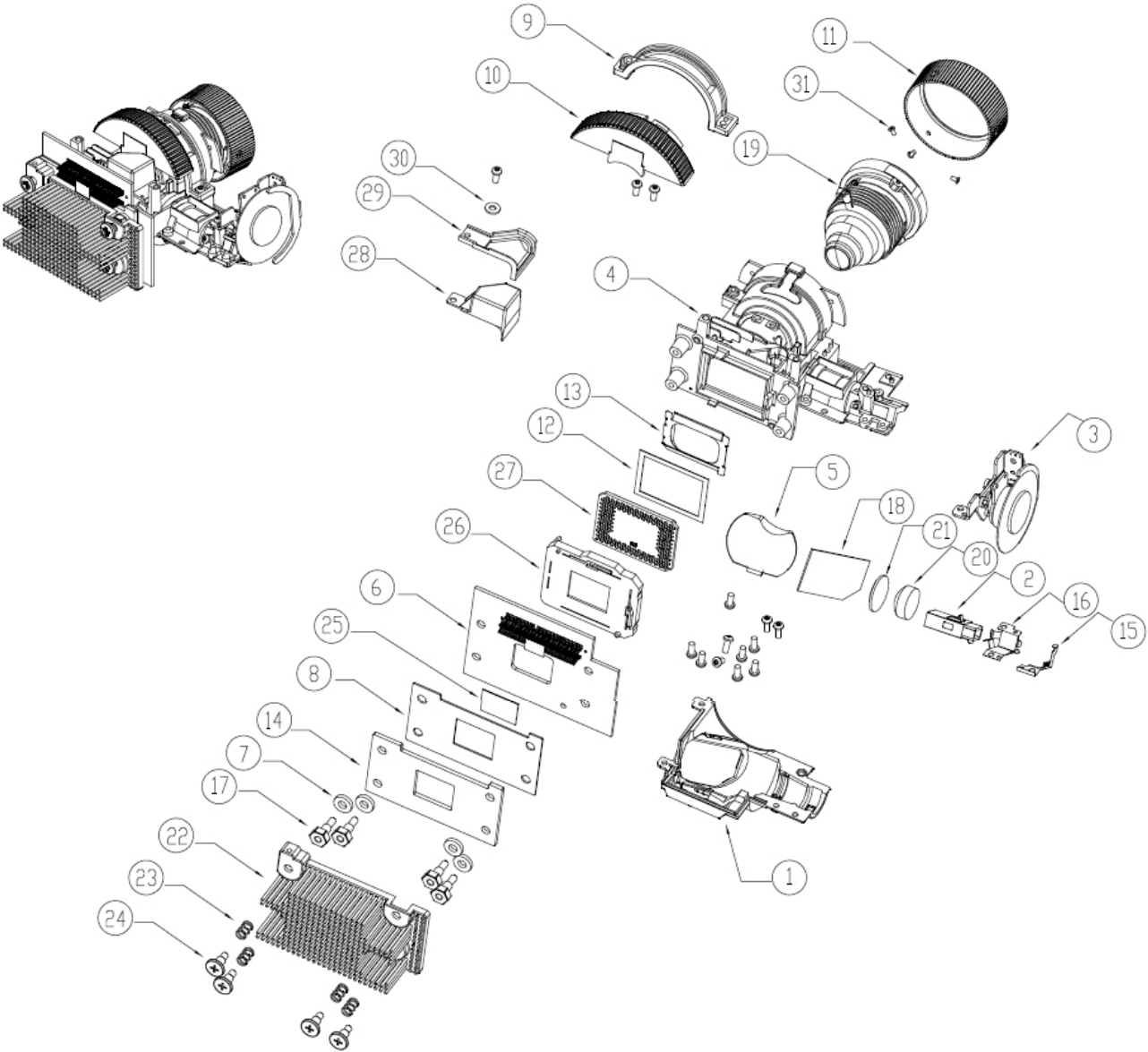
item	P/N	Rev	Description	Parts Supply
1	51.88N06G001	A	TOP CASE PC LN-2520 (BLACK) EP721/727	
	51.88N06G001	A	TOP CASE PC LN-2520 EP723/728	
	51.88N06G0C1	A	TOP CASE PC LN-2520 EW1610	
2	51.88N10G001	A	FOCUS RING COVER PC MN3600H,EP721	
3	51.88N13G001	A	TOP IR LENS PC,EP721	
4	51.88N16G001	A	KEYPAD PC MN3600H,EP721	
5	51.88N17G001	C	4 WAY KEY PC MN3600H,EP721	
6	51.88N18G001	A	ENTER KEY PC MN3600H,EP721	
7	51.88N19G001	A	LED LENS KEYPAD,PC,EP721	
8	51.88N26G001	A	FRONT IR LENS PC,EP721	
9	85.1A526G040	A	SCREW PAN MECH M2.6*4 Ni NYLOK	NO
10	80.88N03G002	B	PCBA KEYPAD BOARD FOR EP721	
11	80.88N05G001	A	PCBA IR BOARD FOR EP721	
12	51.88N30G002	A	ADHESIVE1 FOR TOP IR LENS NEW,EP721	
13	51.88N31G002	A	ADHESIVE2 FOR TOP IR LENS NEW,EP721	
14	51.88N32G001	A	ADHESIVE FOR LED LENS EP721	
15	52.88N15G001	A	SPONGE1 FOR TOP CASE EP721	NO
16	52.88N16G001	A	SPONGE2 FOR TOP CASE EP721	NO
17	52.88N17G001	A	SPONE3 FOR TOP CASE EP721	NO
18	42.0030EG150	A	FFC 20P P=0.5mm MAIN BOARD TO KEYPAD BOARD 150mm EP721	
19	51.88N46G001	A	3M TAPY MYLAR EP721	NO
20	41.82G05G001	A	EMI GASKET W10*L20*H3mm EP719	NO
21	51.88N35G001	A	FRONT VENT NORYL V1050B EP721	NO
22	52.88N21G001	B	SPONGE F12 FOR TOP CASE EP721	NO
23	52.80N07G001	A	M/B ABSORPTION NOISE CVS 15*t10mm L40 HD70	NO
24	51.88N40G001	A	TAPE 3M J1350 FOR IR SENSOR BD 34*45mm EP721	NO
25	52.88N23G001	A	SPONGE FOR ENTER KEY EP721	NO
26	51.88N42G001	A	3M TAPE J1350 FOR KEYPAD BD EP721	NO

## Assy Optical Engine X15



item	P/N	Rev	Description	Parts Supply
	70.88N20GR01	A	ASSY ENGINE MODULE EP721(RMA)	
	70.89M18GR01	A	ASSY TYPE X ENGINE MODULE EP723(RMA)	
1	70.88N04G001	A	ASSY ENGINE BOTTOM COVER EP721	NO
2	70.88N05G001	A	PRE-ASSY ENGINE BASE EP721	NO
3	70.88N06G001	A	ASSY ROD MODULE EP721	NO
10	23.88N20G001	A	YO CONDENSER1 FOR X15	NO
11	23.88N20G011	A	YO CONDENSER2 FOR X15	NO
12	23.88N06G001	A	YO PLASTIC RELAY FOR X15	NO
13	61.88N13G002	A	ROD COVER NEW SUS301 X15	NO
14	61.88N12G001	A	ROD SPRING SUS301,X15	NO
15	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
16	51.88N03G001	A	ZOOM RING HOLDER PC MN3600H,EP721	NO
17	51.88N05G001	A	ZOOM RING PC MN3600H,EP721	
18	51.82Y28G001	A	TEFLON ELEVATOR 12*18mm 0.25t DP715	NO
4	70.88N07G001	A	ASSY COLOR WHEEL MODULE (EP721/727)	NO
	70.89M07G001	A	ASSY COLOR WHEEL MODULE (EP723/728)	NO
5	70.88N08G001	A	ASSY DMD MODULE EP721	NO
6	70.88N09G001	A	PRE-ASSY HEATSINK MODULE (EP721/727)	NO
	70.89M09G001	A	PRE-ASSY HEATSINK MODULE (EP723/728)	NO
7	52.88N04G001	A	DMD RUBBER,X15	NO
8	61.88N15G001	A	DMD MASK SUS301,X15	NO
9	85.4A826G118	A	STEP SCREW FOR TYPEX DMD M2.6*11.8mm,X15	NO
19	41.85W07G001	A	EMI GASKET W5*H4*L30	NO
20	41.82K19G001	A	EMI TAPE W25*L50mm	NO
21	41.82G10G001	A	EMI GASKET W10*L45*H13mm EP719	NO
22	61.88N39G001	A	STOP MASK MG X15	NO

# Assy Optical Engine EW628/EW1610

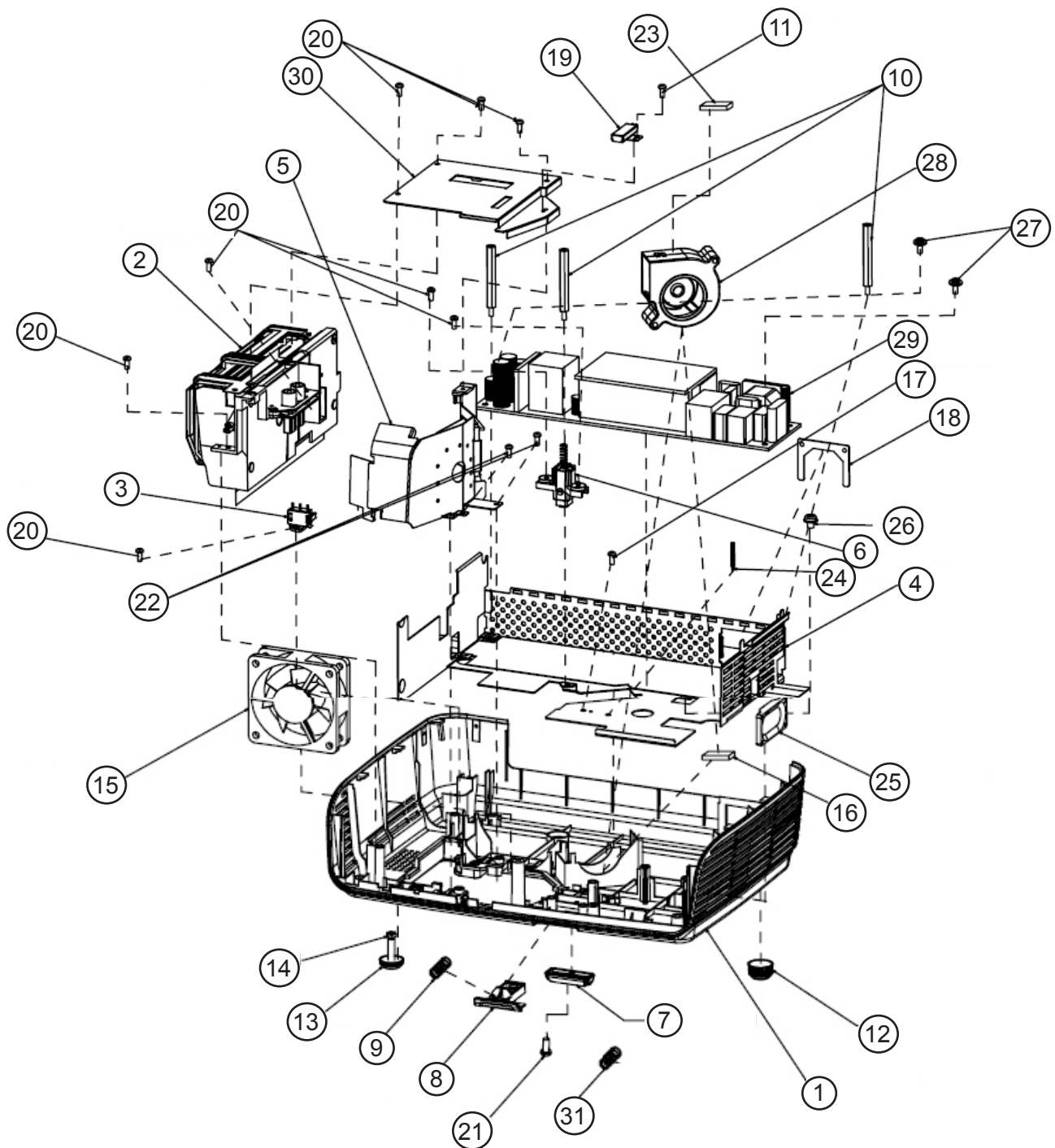


item	P/N	Rev	Description	Parts Supply
	70.8BR08GR01	A	ASSY ENGINE MOUDULEW1610(SERVICE)	
1	70.8AH02G001	A	ASSY ENGINE BOTTOM COVER M409WX	NO
	70.8AH13GR01	A	ASSY ROD MODULE M409WX (RMA)	
2	70.8AH04G001	A	ASSY ROD MODULE M409WX	NO
	70.8AH14GR01	A	ASSY COLOR WHEEL MODULE M409WX (SERVICE)	
3	70.8BR04G001	A	ASSY COLOR WHEEL MODULE EW728	NO
4	70.8BR06G001	A	ASSY ENGINE BASE EW1610	NO
5	70.8BR03G001	A	ASSY RELAY MODULE EW728	NO
	70.8BR09GR01	A	ASSY PCBA MAIN BOARD MODULE FOR EW1610(SERVICE)	
6	80.8BR01G001	D	PCBA MAIN BD FOR EW728	NO
7	51.00210G001	A	DMD SCREW WASHER A39	NO
8	51.89F02G001	A	DMD INSULATION PC A15	NO
9	51.88N03G001	B	ZOOM RING HOLDER PC MN3600H,EP721	NO
10	51.88N05G001	A	ZOOM RING PC MN3600H,EP721	
11	51.88N04G001	A	FOCUS RING PC MN3600H,EP721	
12	52.80J01G001	B	DMD ANTIDUST RUBBER 739 SILICONE RUBBER	NO
13	61.80J10G001	E	DMD LIGHT MASK 739 SUS301	NO
14	61.89F01G001	A	DMD PLATE AL 5052 HD65	NO
15	61.8AH05G001	A	ROD COVER SUS301 0.25t 3/4H M409WX	NO
16	61.88N12G001	C	ROD SPRING SUS301,X15	NO
17	61.88611G001	A	DMD SCREW Ivy10X	NO
18	23.8AH02G001	A	YO MIRROR FOR A15W	NO
19	23.8AH01G001	A	PROJECTION LENS YM31	NO
20	23.8AH20G001	A	CONDENSER1 FOR A15W	NO
21	23.8AH20G002	A	CONDENSER 2 FOR A15W	NO
22	61.8BR03G001	A	DMD HEATSINK AL PIN FIN FORGE EW728	NO
23	61.82B37G001	A	HEAT SINK SPRING	NO
24	61.85927G001	A	DMD SHOULDER SCREW SB21	NO
25	52.83N15G001	A	FUJIPOLLY SARCON XR-Hj, THERMAL PAD FOR DMD HEAT SINK, K=14	



item	P/N	Rev	Description	Parts Supply
26	11.009F0G007	A	CNNT F 203P FOR 720P LGA DMD SOCKET PE020323-03040-10;FOXCO	NO
27	48.8BR01G001	A	DMD TYPE-A SUPER VALUE 0.65" WXGA-800 2xLVDS	
28	61.8AH07G001	A	OFFRAY HEATSINK A15W MG	NO
29	52.8AH02G001	B	OFFRAY-RUBBER-A15W SILICONE	NO
30	87.FL030G008	A	WASHER FLAT 7*3.1*0.8t PC PINGOOD WS- 1M	NO
31	85.YA321G025	A	SCREW FLAT TAP M1.7*2.5 BLACK	NO

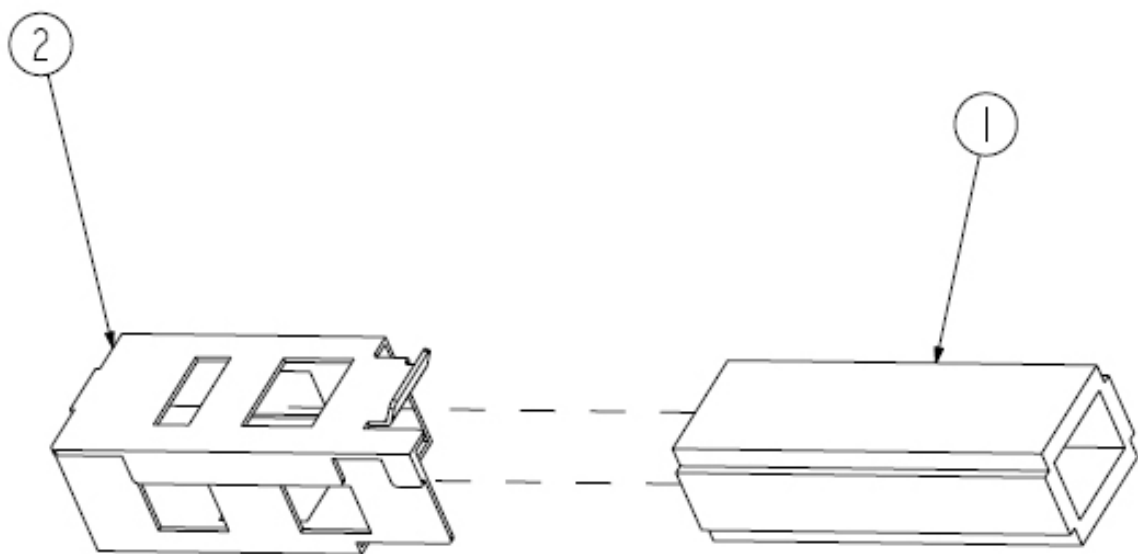
## Assy Bottom Case Module EP721/727/723/728/EW628/EW1610



item	P/N	Rev	Description	Parts Supply
1	51.88N07G001	A	BOTTOM CASE PC LN-2520 (EP721/727)	
	51.89M07G001	A	BOTTOM CASE PC MN3600H (EP723/728)	
	51.88N07G021	A	BOTTOM CASE PC LN-2520 (BLACK) EW1610	
2	70.88N16G001	A	ASSY LAMP DRIVER MODULE (EP721/727)	NO
	70.89M16G001	A	ASSY LAMP DRIVER MODULE (EP723/728)	NO
3	70.88N15G001	A	ASSY INTERLOCK SWITCH MODULE EP721	NO
4	70.88N14G001	A	ASSY LVPS SHEETMETAL MODULE EP721	NO
5	70.88N12G001	A	ASSY BLOWER MODULE (EP721/727)	NO
	70.89M12G001	A	ASSY BLOWER MODULE (EP723/728)	NO
6	70.88N11G001	A	ASSY ELEVATOR MODULE EP721	NO
7	51.88N22G001	A	ELEVATOR FOOT PC MN3600H,EP721	
8	51.88N21G001	A	LINKER,ELEVATOR BUTTON PC MN3600H, EP721	
9	61.82Y22G001	A	ELEVATOR PUSH SPRING SUS304 D=φ4.4 d=φ0.4 L=10 DP715	
10	61.88N28G001	A	MAIN BOARD STAND-OFF M2.6X39.7mm	NO
11	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
12	52.88N06G001	A	FIX FOOT RUBBER,EP721	
13	52.88N07G001	A	ADJUSTABLE FOOT RUBBER,EP721	
14	86.0A123G024	A	HEX NUT M3*0.5P L2.4 Ni	NO
15	49.88N01G002	A	SUNON 60X20 AXIAL FAN	
16	52.88N13G001	A	SPONGE FOR BLOWER BOTTOM	NO
17	85.1A126G040	A	SCREW PAN MECH M2.6*4 Ni	NO
18	61.88N23G001	A	POWER CONNECTOR FIX FRAME SECC EP721	NO
19	43.88N01G001	B	THERMAL SWITCH WITH BRACKET (KLIXON YS11) 100 DEG. C	
20	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO

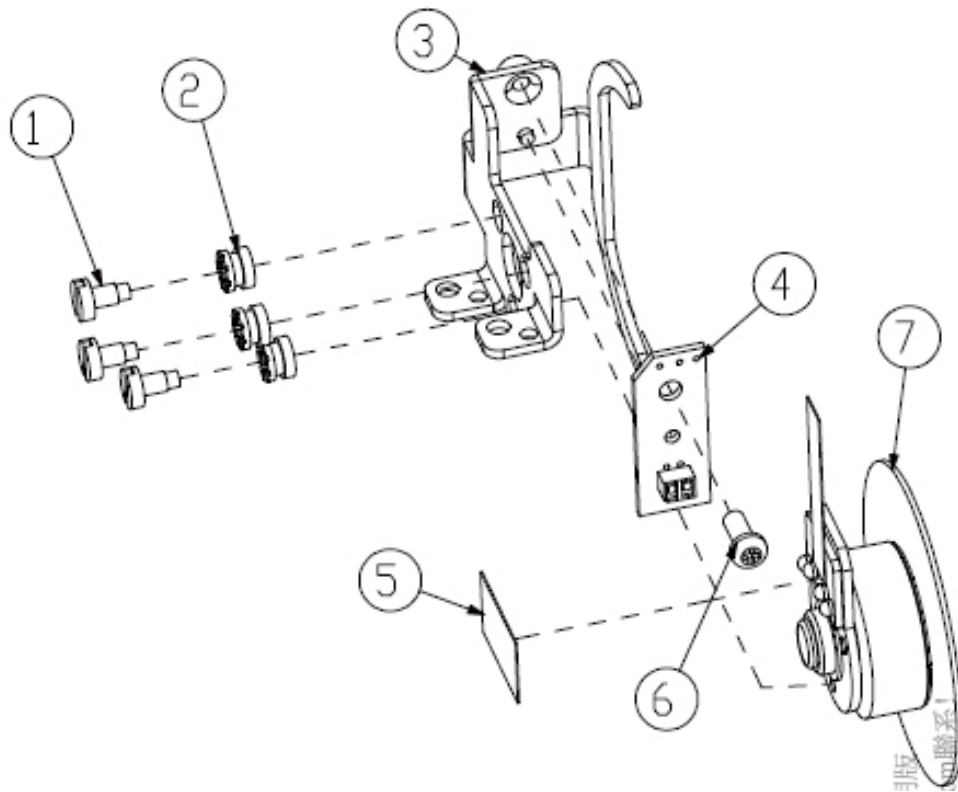
item	P/N	Rev	Description	Parts Supply
21	85.1A322G040	A	SCREW PAN MECH M2*4 BLACK	NO
22	85.1A126G040	A	SCREW PAN MECH M2.6*4 Ni	NO
23	52.88N14G001	A	SPONGE FOR BLOWER TOP	NO
24	61.88N34G001	A	STAND-OFF FOR X15 ENGINE M2.6 X 16.75MM	NO
25	49.88N03G001	B	SPEAKER 2W 4OHM L=300mm EP721	
26	85.1C224G051	A	SCREW PAN MECH M4*5 COLOR W/TOOTH WASHER Cr3+	NO
27	85.3A126G060	A	NEW SCREW M=2.6 D=2.48-2.58 L=6.0 2.0MM	NO
28	49.88N02G002	A	SUNON 45X20 BLOWER WITH RUBBER	
29	75.87J01G201	B	ASSY LVPS MATRITEK 200W EP752(CHINA'S PROCESS)	
30	61.88N20G002	A	SHEET METAL TOP CASE ISOLATION SECC NEW EP721	NO
31	61.82Y23G001	A	ELEVATOR FOOT SPRING SUS304 D=φ3.8 d=φ0.3 L=33.5 PD311	

**Assy Rod Module EP721/EP727/723/728/EW628/EW1610**



item	P/N	Rev	Description	Parts Supply
	70.88N21GR01	A	ASSY ROD MODULE EP721(RMA)	
1	23.88N17G004	A	OERLIKON STEP ROD FOR X15	NO
2	61.88N14G001	A	ROD HOLDER SUS301,X15	NO

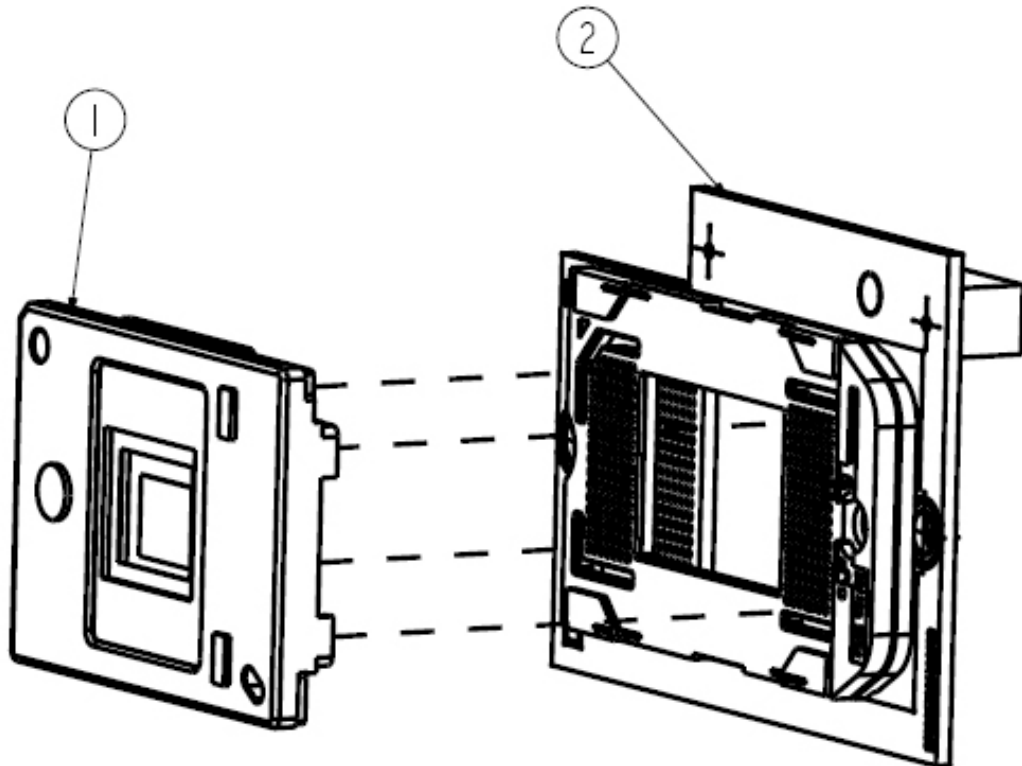
## Assy Color Wheel Module EP721/727/723/728/EW628/EW1610



item	P/N	Rev	Description	Parts Supply
	70.88N19GR01	A	ASSY COLOR WHEEL MODULE EP721(RMA)	
	70.88M19GR01	A	ASSY COLOR WHEEL MODULE EP723(RMA)	
1	61.83628G001	A	COLOR WHEEL SHOULDER SCREW, EzPro755	NO
2	52.83615G001	A	COLOR WHEEL DISC RUBBER, EzPro755	NO
3	61.88N10G001	A	COLOR WHEEL HOLDER SECC,X15	NO
5	51.82Y19G001	A	MYLAR FOR BALLAST PP 0.45t DP715	NO
7	23.88N19G001	A	YO NA32R CW R80Y30G84W90B76 FOR X15	NO
4	80.88N04G001	A	PCBA PHOTO SENSOR BOARD FOR EP721	
6	85.1A126G040	A	SCREW PAN MECH M2.6*4 Ni	NO

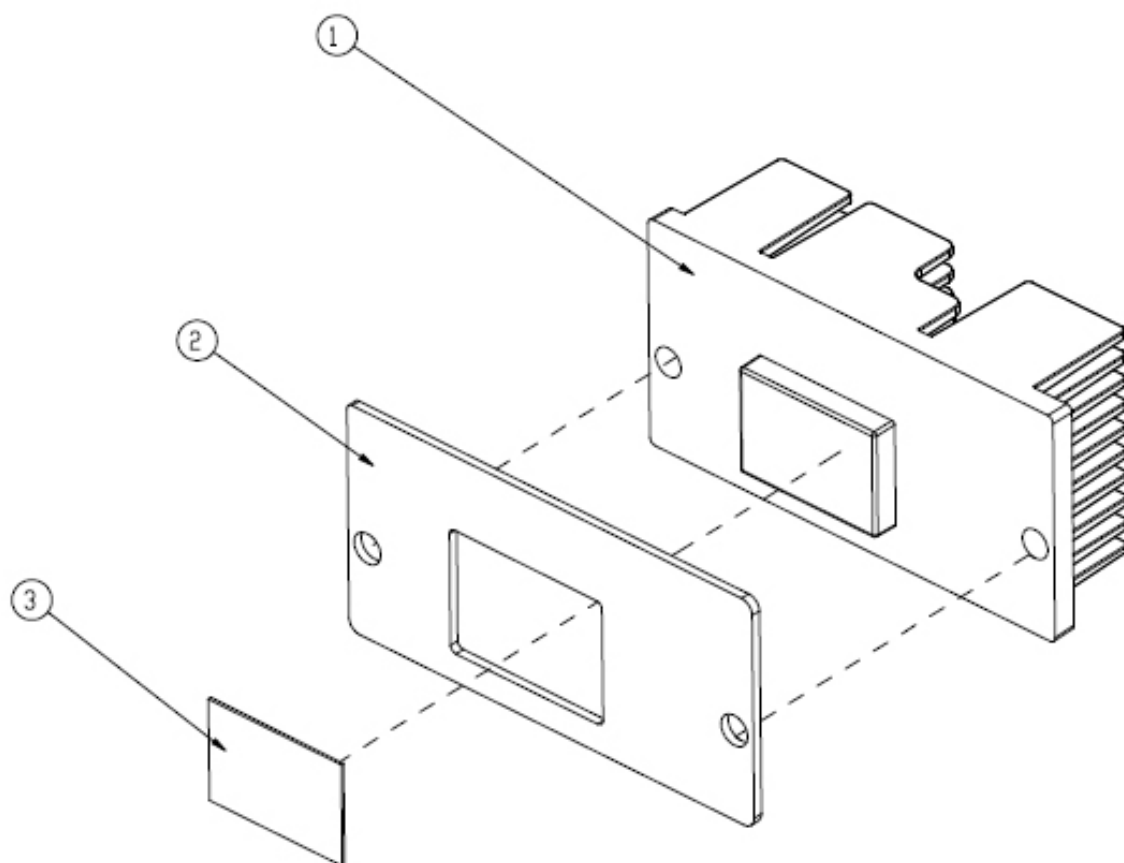


## Assy DMD Module EP721/727/723/728/EW628/EW1610



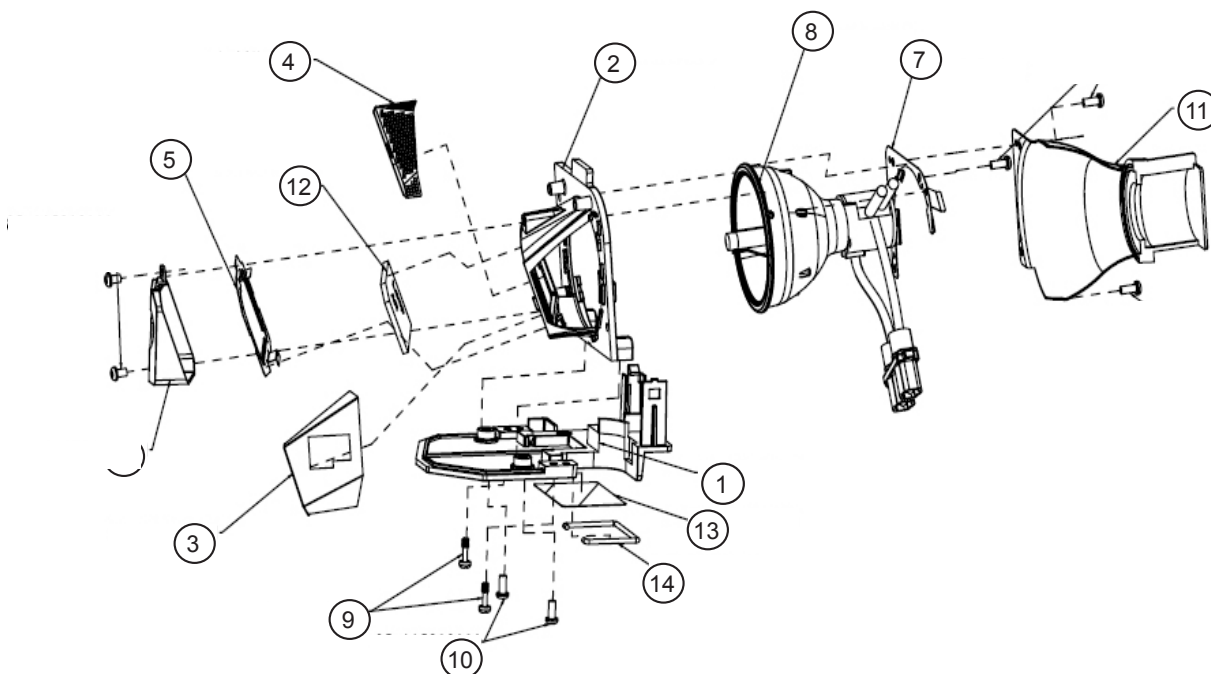
item	P/N	Rev	Description	Parts Supply
1	48.87K01G001	A	DMD Type-X 800x600 PIXEL 0.55" SVGA LVDS "TI" For EP721/723	
	48.87M01G001	A	DMD Type-X 1024x768 PIXEL 0.55" XGA LVDS For EP727/728	
2	80.88N02G001	C	PCBA DMD BOARD FOR EP721	
	80.88S01G001	F	PCBA MAIN BOARD FOR EP727	
	80.89M01G001	E	PCBA MAIN BOARD FOR EP723	
	80.89N01G001	G	PCBA MAIN BOARD FOR EP728	
	80.89F02G001	A	PCBA DMD BD FOR HD65(EW1610)	

## Pre-assy Heatsink Module EP721/727/723/728/EW628/EW1610



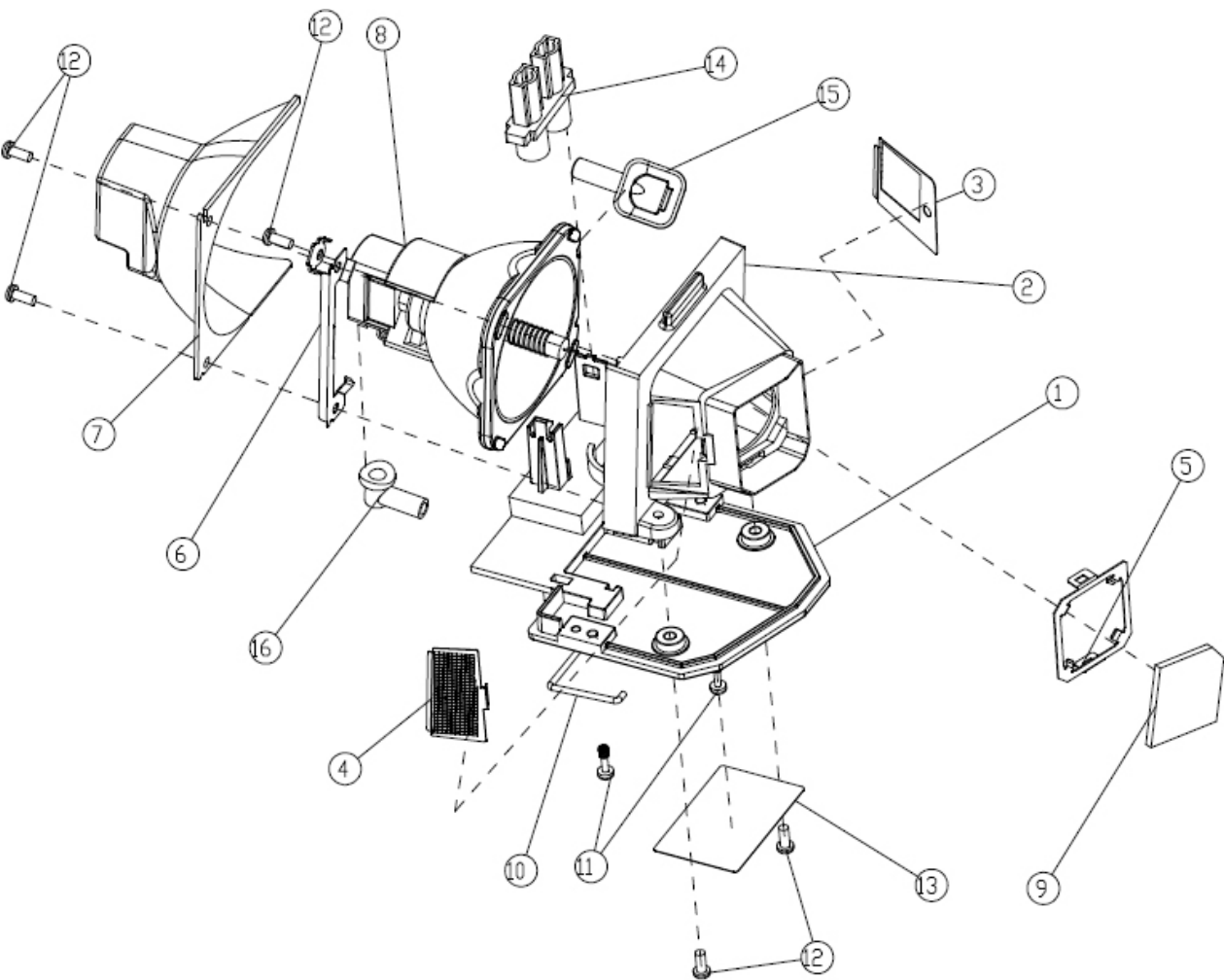
item	P/N	Rev	Description	Parts Supply
1	61.88N03G002	A	DMD HEAT SINK NEW AL1070 X15	NO
2	52.88N03G001	A	HEAT SINK RUBBER,X15	NO
3	52.87J01G001	A	DMD THERMAL PAD 25*17*0.5t FUJIPOLY SARGON GR-Hn	

## Assy Lamp Module EP721/727



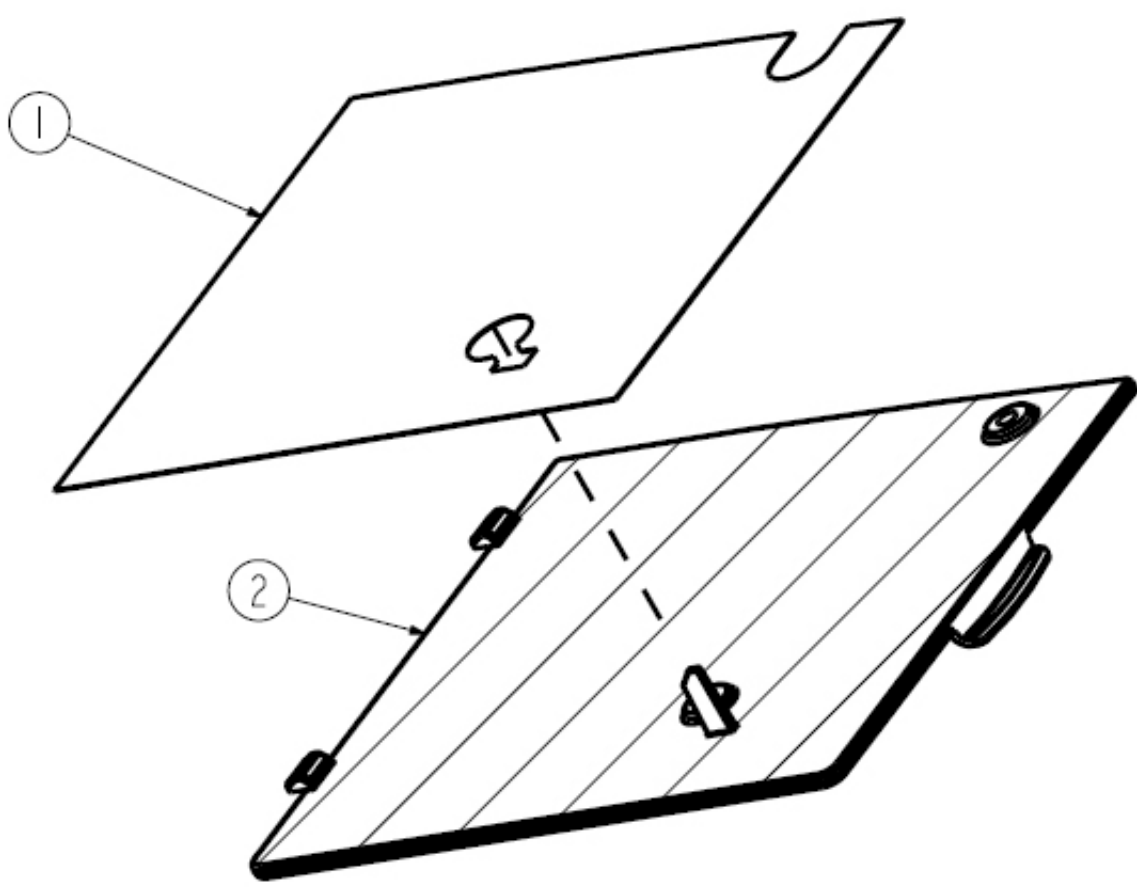
item	P/N	Rev	Description	Parts Supply
	SP.88N01GC01	A	LAMP MODULE FOR PROJECTOR EP721/EP727	
1	51.88N02G001	B	LAMP HOUSING PPS,X15	NO
2	61.88N02G001	A	LAMP HOLDER MG,X15	NO
3	61.88N06G001	B	LAMP MESH LEFT SUS301,X15	NO
4	61.88N07G001	A	LAMP MESH,RIGHT,SUS301,X15	NO
5	61.88N09G001	A	UV IR HOLDER SUS301,X15	NO
6	61.88N25G001	A	88N LEAKAGE HOLDER,AL,X15	NO
7	61.88N08G001	A	LAMP FIX SPRING-NEW SUS301 X15	NO
8	23.88K15G001	A	LAMP MODULE PHOENIX 180W FEX88	NO
9	61.85928G001	A	LAMP HOUSING SHOULDER SCREW SB21	NO
10	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
11	75.88N03G001	A	ASSY LAMP SHELL MODULE EP721	NO
12	23.88N10G002	A	UV-IR 24*25*2mm(5*5mm cut)_Add Dot ink mark_YO	NO
13	35.88N03G002	A	LAMP WARNING LABEL NEW EP721	NO
14	61.86808G002	A	LAMP CHANGER HANDLE SUS304 1.6d DP725 FOR CPC	NO

Assy Lamp Module EP723/728/EW628/EW1610



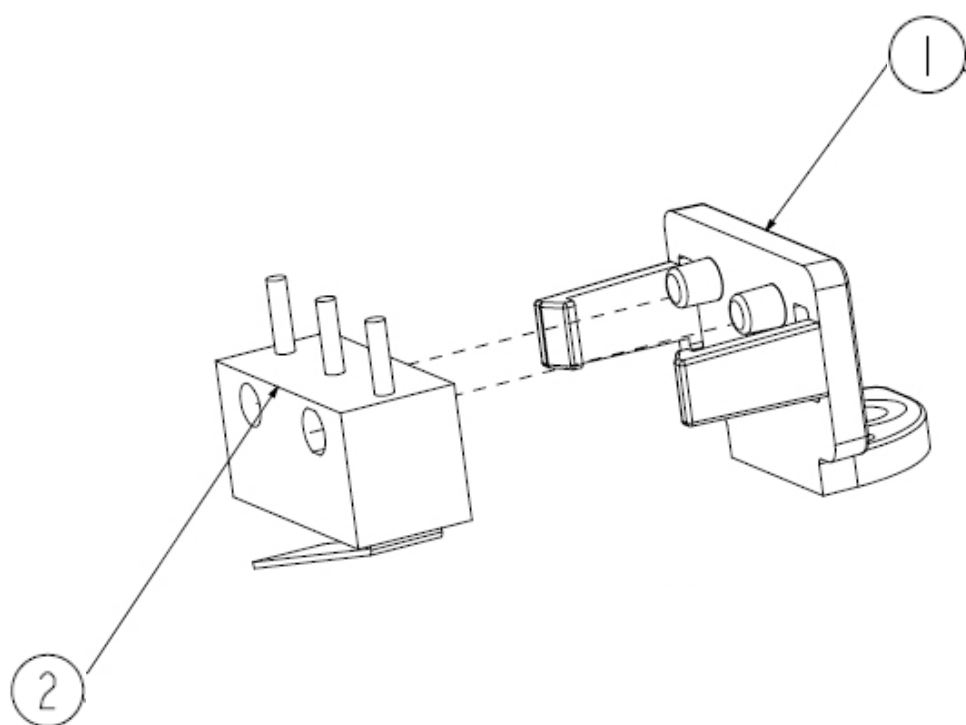
item	P/N	Rev	Description	Parts Supply
	SP.89M01GC01	A	LAMP MODULE FOR PROJECTOR EP723/ EP728	
1	51.89M01G001	B	LAMP HOUSING PPS EP723	NO
2	61.89M01G001	B	LAMP HOLDER MG EP723	NO
3	61.89M02G001	A	LAMP MESH IN SUS301 1/2H EP723	NO
4	61.89M03G001	A	LAMP MESH OUT SUS301 1/2H EP723	NO
5	61.89S14G001	B	UVIR SPRING SUS301 M209X	NO
6	61.83F12G001	B	LAMP CLAMP SUS301 t=0.3 HD72	NO
7	61.89M05G001	B	LAMP LIGHTCUT MG EP723	NO
8	23.87J15G001	A	OSRAM P-VIP 200W/1.0 E20.6n	NO
9	23.87M10G002	A	UV-IR 24*25*2mm(5*5mm cut)-YO	NO
10	61.86808G001	A	LAMP CHANGER HANDLE SUS304 1.6d DP725	NO
11	61.85928G001	A	LAMP HOUSING SHOULDER SCREW SB21	NO
12	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
13	35.88N03G002	A	LAMP WARNING LABEL NEW EP721	NO
14	42.00430G002	A	W.A. 85/95mm #22 FLUBON TUBE FOR LAMP 2400MP	NO
	76.83M02G002	A	OUTSIDE W.A. 85/95mm #22 FLUBON TUBE FOR LAMP 2400MP	NO
15	52.85902G012	A	LAMP CONTACT COVER RUBBER 300	NO
16	52.80J26G001	A	LAMP RUBBER VULCAN-1	NO

**Assy Lamp Cover Module EP721/727/723/728/EW628/EW1610**



item	P/N	Rev	Description	Parts Supply
	70.88N22GR01	A	ASSY LAMP COVER MODULE EP721 (SERVICE)	
1	61.88N30G001	B	LAMP COVER FOIL AL EP721	NO
2	51.88N09G001	A	LAMP COVER NORYL V1050B,EP721	NO

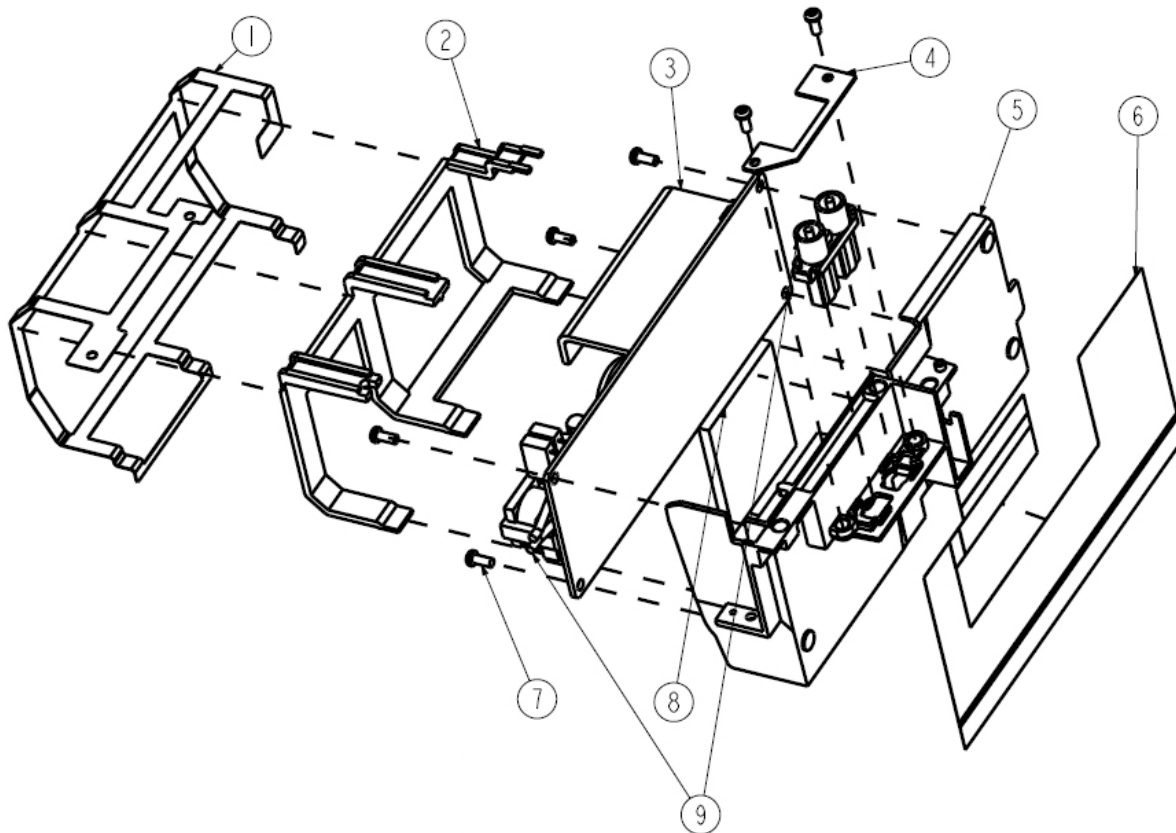
Assy Interlock Switch Module EP721/727/723/728/EW628/EW1610



item	P/N	Rev	Description	Parts Supply
1	51.88N25G001	A	INTERLOCK SWITCH HOLDER PC LN-2520 (BLACK) EP721	NO
2	75.88N02G001	A	ASSY INTERLOCK SWITCH MODULE EP721	

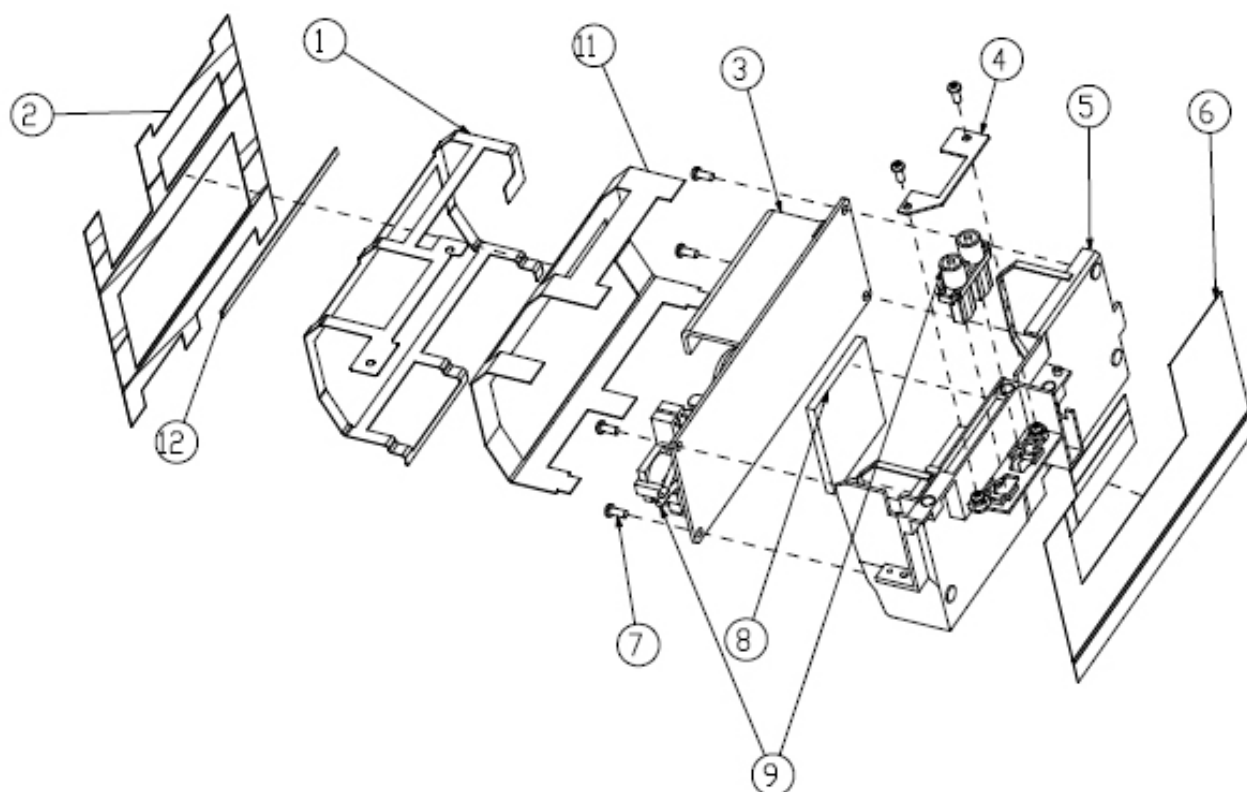


## Assy Lamp Driver Module EP721/727



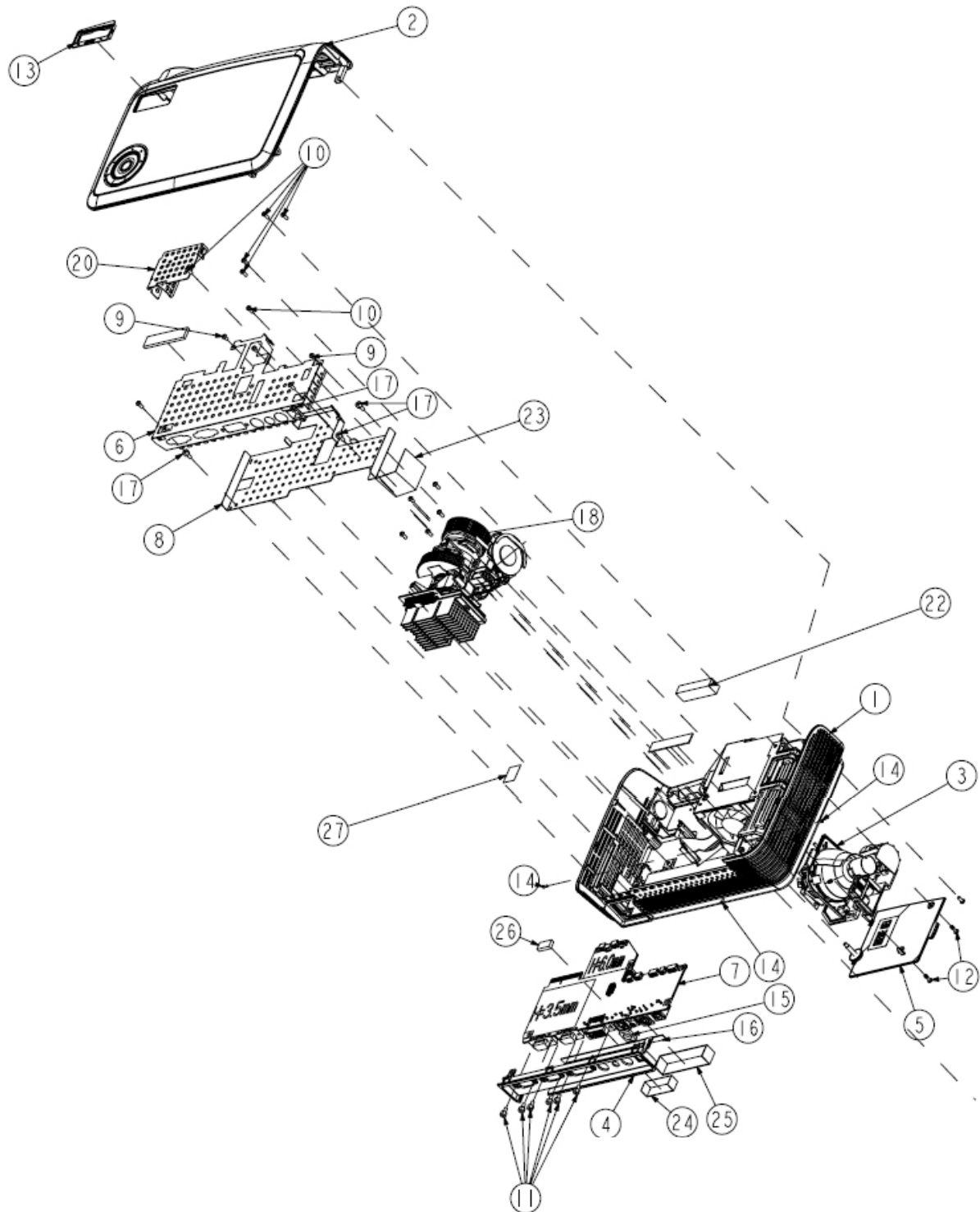
item	P/N	Rev	Description	Parts Supply
1	61.88N31G001	A	LAMP DRIVER EMI SHEETMETAL SUS301 EP721	NO
2	51.88N33G001	A	LAMP DRIVER EMI SHEETMETAL PROTECTOR PPS EP721	NO
3	75.88N01G001	B	ASSY HITACHI LAMPDRIVER 180W PS-272A-LS-200-18H	
4	61.88N21G001	A	LAMP CONNECTOR FIX FRAME SECC,EP721	NO
5	51.88N20G001	A	LAMP DRIVER FIX FRAME PPS,EP721	NO
6	61.88N33G001	A	LAMP DRIVER EMI FOIL COPPER EP721	NO
7	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
8	52.88N19G001	B	LAMP DRIVER THERMAL PAD 42*39*3.0t SARCON GR-d	NO
9	42.83M06G001	B	CABLE W.A. 2P #20 180mm LAMP DRIVER TO LVPS 2400MP	NO
10	42.80J08G001	A	CABLE W.A. 5P #28 170mm BALLAST TO M/B	NO

## Assy Lamp Driver Module EP723/728/EW628/EW1610



item	P/N	Rev	Description	Parts Supply
1	61.89M07G001	A	LAMP DRIVER EMI SHEETMETAL SUS301 EP723	NO
2	51.89M02G001	A	LAMP DRIVER EMI PROTECT MYLAR IN-SIDE PP EP723	NO
3	75.87J04G001	B	ASSY OSRAM LAMP DRIVER200W (UN-ISHAPE)	
4	61.88N21G001	A	LAMP CONNECTOR FIX FRAME SECC, EP721	NO
5	51.88N20G001	A	LAMP DRIVER FIX FRAME PPS,EP721	NO
6	61.88N33G001	A	LAMP DRIVER EMI FOIL COPPER EP721	NO
7	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
8	52.88N19G001	B	LAMP DRIVER THERMAL PAD 42*39*3.0t SARCON GR-d	NO
9	42.83M06G001	B	CABLE W.A. 2P #20 180mm LAMP DRIVER TO LVPS 2400MP	NO
10	42.00423G001	A	W.A. 5P #28 170MM LAMP DRIVER TO MB EP723	NO
11	51.89M03G001	A	LAMP DRIVER EMI PROTECT MYLAR OUT-SIDE PP EP723	NO
12	51.89M04G001	A	LAMP DRIVER EMI FIX MYLAR UP PP EP723	NO

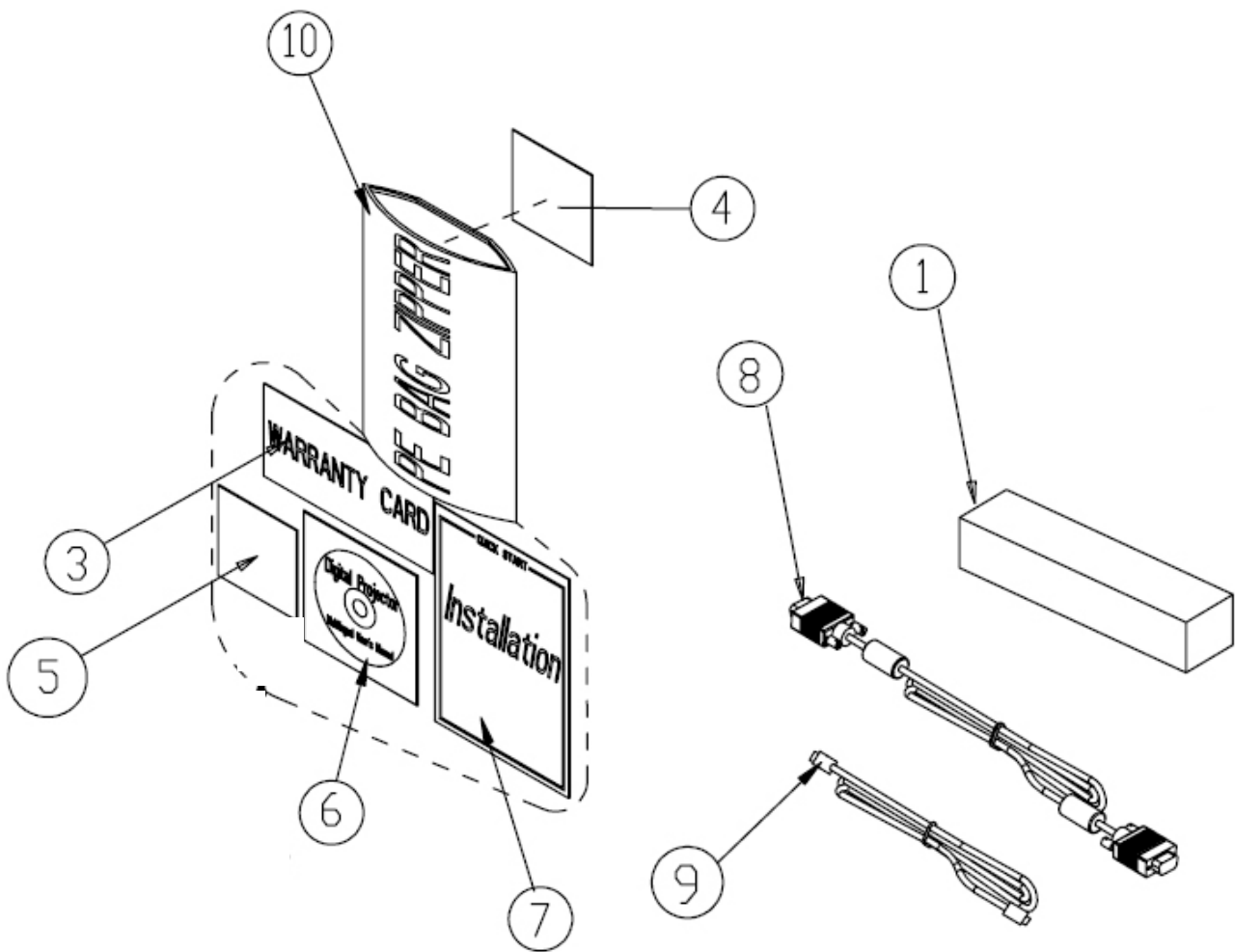
## DC. EP721/727/723/728/EW628/EW1610



item	P/N	Rev	Description	Parts Supply
1	70.88N01G001	A	ASSY BOTTOM CASE MODULE EP721	NO
	70.88S01G001	A	ASSY BOTTOM CASE MODULE EP727	NO
	70.89M10G001	A	ASSY BOTTOM CASE MODULE EP723	NO
	70.89N10G001	A	ASSY BOTTOM CASE MODULE EP728	NO
2	70.88N02G001	A	ASSY TOP CASE MODULE EP721	NO
3	70.88N10G001	A	ASSY LAMP MODULE EP721/727	NO
	70.89M10G001	A	ASSY LAMP MODULE EP723/728	NO
4	51.88N08G001	A	IO COVER PC MN 3600H,EP721	
5	70.88N13G001	A	ASSY LAMP COVER MODULE EP721	NO
6	61.88N18G001	A	SHEET MEATL IO SUS301,EP721	NO
7	80.88N01G001	F	PCBA MAIN BOARD FOR EP721	
	80.88S01G001	G	PCBA MAIN BOARD FOR EP727	
	80.89M01G001	E	PCBA MAIN BOARD FOR EP723	
	80.89N01G001	F	PCBA MAIN BOARD FOR EP728	
8	61.88N17G001	B	SHEET METAL BTM M/B SECC,EP721	NO
9	85.1A126G040	A	SCREW PAN MECH M2.6*4 Ni	NO
10	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
11	85.005AGG040	A	SCREW I/O STEEL #4-40UNC*H4*L5.5 NYLOK	NO
12	61.85928G001	A	LAMP HOUSING SHOULDER SCREW SB21	NO
13	51.88N12G001	A	ZOOM RING COVER PC MN3600H,EP721	
14	85.4A321G050	A	SCREW FLAT HEAD MECH M1.7*5 D2.5 BLACK	NO
15	41.85M09G001	A	EMI GASKET W13*H3*L13 mm , 9mm	NO
16	41.88N02G001	A	EMI GASKET W6*H1*L140mm	NO
17	61.88N29G001	A	MAIN BOARD STAND-OFF M2.6X4.0mm	NO
18	70.88N03G001	A	ASSY ENGINE MODULE EP721	NO
	70.88S03G001	A	ASSY ENGINE MODULE EP727	NO
	70.89M03G001	A	ASSY ENGINE MODULE EP723	NO
	70.89N03G001	A	ASSY ENGINE MODULE EP728	NO

item	P/N	Rev	Description	Parts Supply
19	35.88N01G001	A	I/O COVER LABEL EP721	NO
20	61.88N35G001	B	SHEET METAL FOR EMI SECC EP721	NO
21	85.1A523G060	A	SCREW PAN MECH M3*6 NYLOK, GREEN	NO
22	52.80N07G001	A	M/B ABSORPTION NOISE CVS 15*t10mm L40 HD70	NO
23	51.88N37G001	B	MYLAR FOR ENGINE EP721	NO
24	51.88N38G001	A	MYLAR FOR DVI EP721	NO
25	51.88N39G001	A	MYLAR FOR IO EP721	NO
26	52.88N22G001	A	M/B THERMAL PAD GR-b 16.3X8.8X3.5t	NO
27	51.81541G001	A	TAPE 3M J350 17*30mm	NO

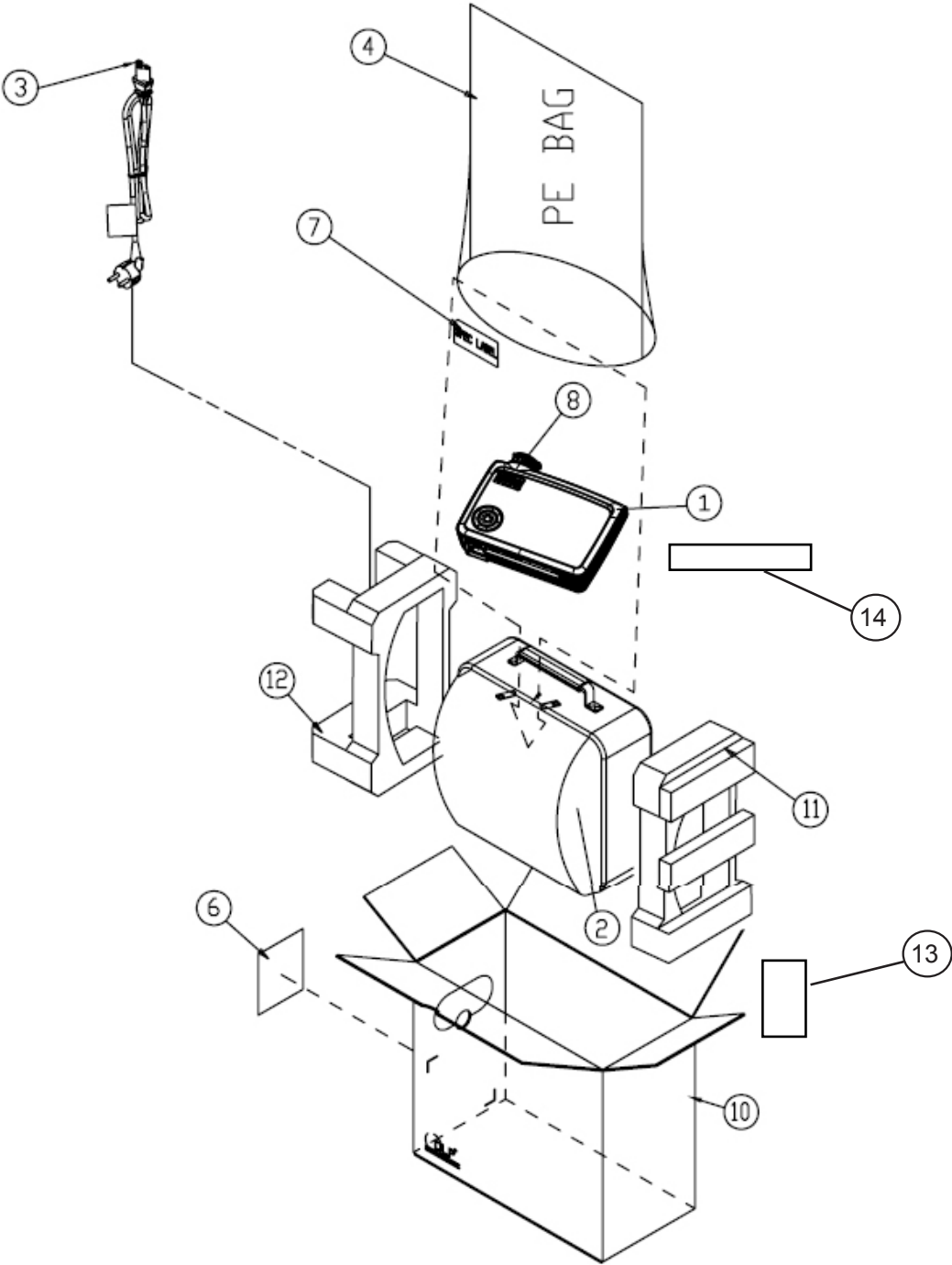
**A.K. EP721/727/723/728/EW628/EW1610**





item	P/N	Rev	Description	Parts Supply
1	45.88N01G001	A	REMOTE CONTROLLER WITH LASER JAECS EP721	
3	36.00012G002	C	WARRANTY CARD 3 YEARS, USA FOR OPTOMA LPP SERIES(EP721/723/727/728)	
	36.00024G001	A	WARRANTY CARD US FOR LPP SERIES, 1 YEAR(EW1610)	
4	36.00018G001	B	EXTENDED WARRANTY REGISTRATION FORM,USA FOR LPP SERIES	
5	36.00020G001	A	QUICK TROUBLESHOOTING GUIDE MULTILINGUAL	
6	36.88N01G001	B	USER'S GUIDE MULTILINGUAL (CD) EP721/723/727/728	
	36.8BR01G001	A	USER'S GUIDE MULTILINGUAL (CD) OPTO- MA EW1610	
7	36.88N02G001	A	QUICK START CARD MULTILINGUAL EP721	
8	42.00200G002	A	CABLE VGA 15P 1.8M BLK EP739	
9	42.00280G001	A	CABLE USB(A) TO USB(B) 2M BLK 2100MP	
10	51.00027G003	A	PE BAG ZIPPER 33cm*25cm SIZE GREEN FOR OP EP721/723/727/728	
	51.86213G002	A	PE BAG ZIPPER #9 W/RECYCLING MARK FOR OPTOMA EW1610	

D.P. EP721/727/723/728/EW628/EW1610



item	P/N	Rev	Description	Parts Supply
1	DC.88N01G001	A	D.C. EP721	NO
2	53.88N01G001	A	SOFT CARRY BAG EP721	
3	42.50115G001	A	CABLE POWER CORD 1.8M SP30+IS14 US	
4	51.52109G003	A	PE BAG 450*350*0.07 FOR OPTOMA	
6	35.52302G091	A	LABEL CARTON 108*92 BLANK	
7	35.88N02G001	A	SPEC LABEL EP721	
8	75.88N04G001	A	ASSY LENS CAP MODULE EP721	
10	55.88N01G002	A	CARTON CARRY BOX NEW EP721	
11	56.88N01G002	A	CUSHION R EPE NEW EP721	
12	56.88N02G002	A	CUSHION L EPE NEW EP721	
13	35.86821G001	A	LABEL PREVENT OPEN DIM28MM	
14	51.88N47G001	A	TOP CASE PROTECTION FILM EP721	

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# Appendix B

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## I. Serial Number System Definition

Serial Number Format for Projector (For EP721)

**Q**   **88N**   **7**   **31**   **AAAAA**   **C**   **0001**

①   ②   ③   ④   ⑤   ⑥   ⑦

- ① :   **Q = Optoma**
- ② :   **88N = Project code**
- ③ :   **7 = Last number of the manufacture year (ex:2007 = 7)**
- ④ :   **31 = week of the manufacture year ( ex: the thirty-one week of the year = 31)**
- ⑤ :   **AAAAA = not-defined**
- ⑥ :   **C = Manufacture factory (TW or China)**
- ⑦ :   **0001 = Serial code**

EX: Q88N731AAAAAC0001

This label represents the serial number for EP721. It is produced at CPC on thirty-one week of 2007. Its serial code is 0001.

### Serial Number Format for Projector (For EP727)

**Q**   **88S**   **8**   **04**   **AAAAA**   **C**   **0002**

①   ②   ③   ④   ⑤   ⑥   ⑦

- ① : Q = Optoma
- ② : 88S = Project code
- ③ : 8 = Last number of the manufacture year (ex:2008 = 8)
- ④ : 04 = week of the manufacture year ( ex: the forth week of the year = 04)
- ⑤ : AAAAA = not-defined
- ⑥ : C = Manufacture factory (TW or China)
- ⑦ : 0002 = Serial code

EX: Q88S804AAAAAC0002

This label represents the serial number for EP727. It is produced at CPC on forth week of 2008. Its serial code is 0002.

**Serial Number Format for Projector (For EP723)**

**Q   89M   8   23   AAAAA   C   0001**

①   ②   ③   ④   ⑤   ⑥   ⑦

- ① : Q = Optoma
- ② : 89M = Project code
- ③ : 8 = Last number of the manufacture year (ex:2008 = 8)
- ④ : 23 = week of the manufacture year ( ex: the twenty-three week of the year = 23)
- ⑤ : AAAAA = not-defined
- ⑥ : C = Manufacture factory (TW or China)
- ⑦ : 0002 = Serial code

EX: Q89M823AAAAAC0001

This label represents the serial number for EP723. It is produced at CPC on twenty-three week of 2008. Its serial code is 0001.

**Serial Number Format for Projector (For EP728)**

**Q**   **89N**   **8**   **10**   **AAAAA**   **C**   **0001**

①   ②   ③   ④   ⑤   ⑥   ⑦

- ① : Q = Optoma
- ② : 89N = Project code
- ③ : 8 = Last number of the manufacture year (ex:2008 = 8)
- ④ : 10 = week of the manufactureyear ( ex: the tenth week of the year = 10)
- ⑤ : AAAAA = not-defined
- ⑥ : C = Manufacture factory (TW or China)
- ⑦ : 0001 = Serial code

EX: Q89N810AAAAAC0001

This label represents the serial number for EP728. It is produced at CPC on tenth week of 2008. Its serial code is 0001.



### Serial Number Format for Projector (For EW1610)

**Q**   **8BR**   **8**   **15**   **AAAAA**   **C**   **0001**

①   ②   ③   ④   ⑤   ⑥   ⑦

- ① : Q = Optoma
- ② : 8BR = Project code
- ③ : 8 = Last number of the manufacture year (ex:2008 = 8)
- ④ : 15 = week of the manufacture year ( ex: the fifteenth week of the year = 15)
- ⑤ : AAAAA = not-defined
- ⑥ : C = Manufacture factory (TW or China)
- ⑦ : 0002 = Serial code

EX: Q8BR815AAAAAC0001

This label represents the serial number for EW1610. It is produced at CPC on fifteenth week of 2008. Its serial code is 0001.

## II. PCBA Code Definition

PCBA Code for Projector

**A**   **B**   **XXXXXXXXXX**   **C**   **XXX**   **EEEE**

①   ②   ③   ④   ⑤   ⑥

① : ID

② : Vendor Code

③ : P/N

④ : Revision

⑤ : Date Code

⑥ : S/N